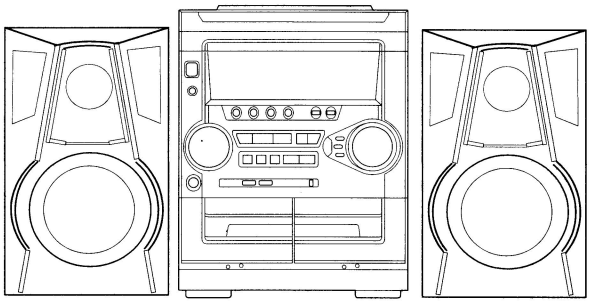
aiwa
SERVICE

NSX-AJ20 U
NSX-SZ20 LH



SERVICE MANUAL

COMPACT DISC
STEREO SYSTEM

BASIC TAPE MECHANISM : ZZM-3 YPR1NF
BASIC CD MECHANISM : AZG-1 YKZD3RDF

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-AJ20	CX-NAJ20	SX-NAJ22	RC-ZAS02
NSX-SZ20	CX-NSZ20	SX-NSZ22	

• If requiring information about the CD mechanism, see Service Manual of AZG-1, (S/M Code No. 09-001-335-3N8).

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S/M Code No. 09-001-423-4R1

SPECIFICATIONS

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output	Rated U: 50 W + 50 W (50 Hz - 20 kHz, THD less than 1%, 6 ohms) LH: 40 W + 40 W (1 kHz, THD 1%, 6 ohms) Reference U: 62 W + 62 W (1 kHz, THD less than 10%, 6 ohms) LH: 50 W + 50 W (1 kHz, THD 10% 6 ohms)
Total harmonic distortion	U: 0.08% (25 W, 1 kHz, 6 ohms, DIN AUDIO) LH: 0.05% (25 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 500 mV
Outputs	SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS <U> accept speakers of 6 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 15 kHz
Recording system	AC bias
Heads	Deck 1 : Playback head x 1 Deck 2 : Recording/Playback head x 1, erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system>
<U: SX–NAJ22, LH: SX–NSZ22>

Speaker System	3 way, bass reflex (magnetic shielded type)
Speaker units	Woofer: 140 mm ($5^5/_8$ in.) cone type Tweeter: 60mm ($2^3/_8$ in.) cone type Super tweeter: 20 mm ($^{13}/_{16}$ in.) ceramic type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	230 x 324x 256 mm ($9^1/_8$ x $12^7/_8$ x $10^1/_8$ in.)
Weight	3.8 kg (8 lbs 6 oz.)

<General>

Power requirements	U: 120 V AC, 60 Hz LH: 120 V/220-230 V/240 V AC (switchable), 50/60 Hz
Power consumption	U: 75 W LH: 80 W
Power consumption	With power-economizing mode off : 13 W With power-economizing mode on : 0.9 W
Dimensions of main unit (W x H x D)	260 x 328 x 335 mm ($10^1/_4$ X 13 X $13^1/_4$ in.)
Weight of main unit	U: 6.4 kg (14 lbs 2 oz.) LH: 6.3 kg

- Design and specifications are subject to change without notice.

- The word "BBE"and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound,Inc.

ACCESSORIES / PACKAGE LIST

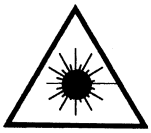
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF9-902-010		IB,LH (ESP) M<LH>
1	8A-NF9-903-010		IB,U (ESF) M<U>
2	8Z-NF9-701-210		RC UNIT,ZAS02
3	87-043-115-010		ANT,FEEDER FM
4	87-006-268-010		AM-LOOP ANT NC (UN)
⚠ 5	87-A91-017-010		PLUG,CONVERSION JT-0476<LH>

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

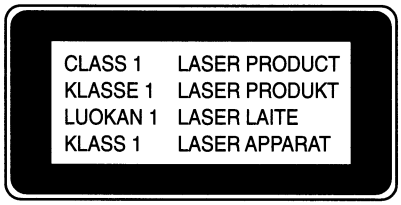
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



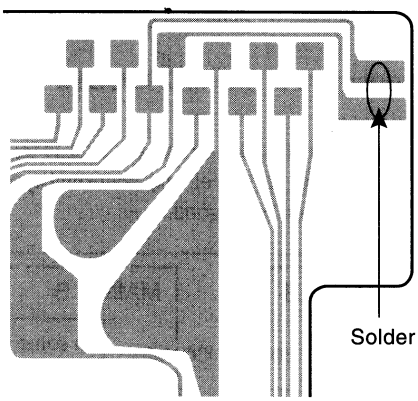
Precaution to replace Optical block

(KSS – 213F)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

PICK-UP Assy P.C.B



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

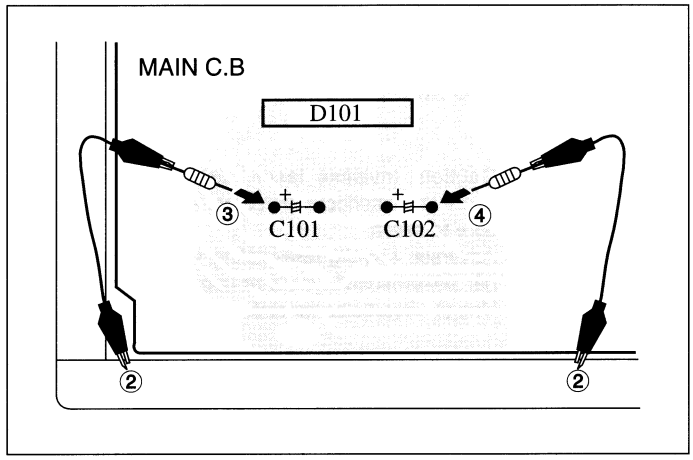


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

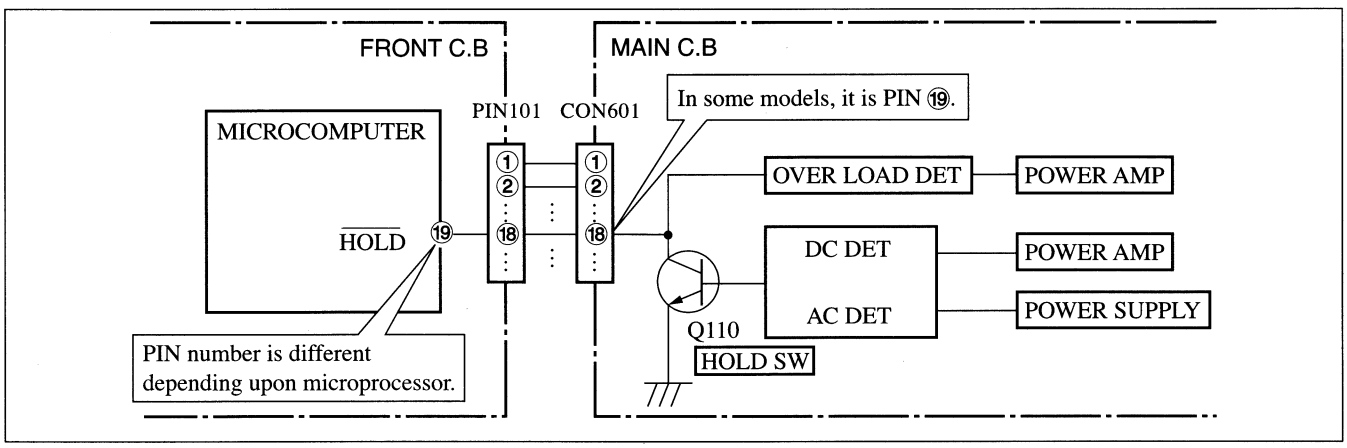


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

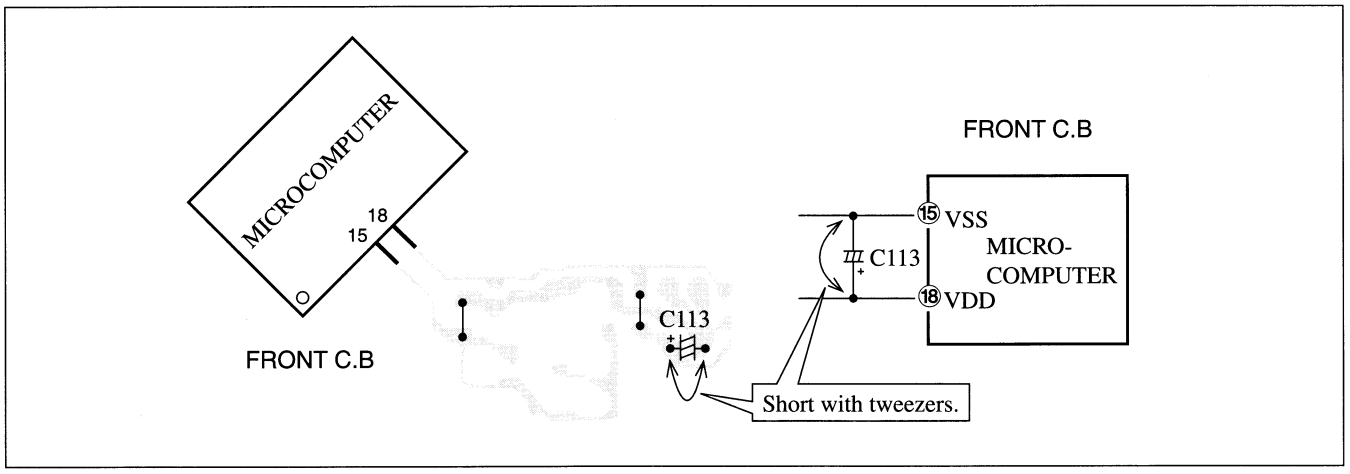


Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A21-398-010		IC,STK490-110
	87-017-888-080		IC,NJM4558MD
	87-A21-401-040		C-IC,M61503FP
	87-A21-415-010		IC,LA1843
	8A-NF9-601-010		C-IC,UPD780226GF-012-3BA
	87-A21-482-010		IC,RPM6938-H4
	87-070-127-110		IC,LC72131 D
	87-A21-269-010		IC,EW732
TRANSISTOR			
	87-026-609-080		TR,KTA1266GR
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-610-080		TR,KTC3198GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-075-080		C-TR,2SA1235F
	87-026-245-080		TR,DTC114ES<LH>
	87-A30-198-080		TR,KTC3199GR<LH>
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-107-070		C-TR,CMBT5401
	87-A30-106-040		C-TR,CMBT5551
	87-026-235-080		CHIP-TR,DTC114EK<U>
	87-A30-087-080		C-FET,2SK2158
	87-A30-091-080		FET,2SJ460
	87-A30-090-080		FET,2SK2541
	87-A30-104-080		C-TR,RT1N 441C
	89-333-317-880		TR,2SC3331 (0.5W)
	87-A30-318-080		TR,CSA952K
	87-A30-329-080		TR,CD1585BC
	89-327-143-080		TR,2SC2714 (0.1W)
	87-A30-072-080		C-TR,RT1P 144C
	87-A30-234-080		TR,CSC4115BC
DIODE			
	87-A40-736-080		DIODE,1N4148M(SEM)
	87-A40-393-090		DIODE,1N5402GW(F20)<U>
	87-A40-535-080		DIODE,1N5393-GOODARK<LH>
	87-A40-455-090		DIODE,RL203 GW
	87-A40-553-080		DIODE,1N4003 LES
	87-A40-776-080		ZENER,UZ27BSD
	87-A40-764-080		ZENER,UZ10BSC
	87-A40-313-080		C-DIODE,MC 2840
	87-A40-270-080		C-DIODE,MC2838
	87-A40-269-080		C-DIODE,MC2836
	87-A40-249-080		ZENER,MTZJ 15A
	87-A40-752-080		ZENER,UZ6.2BSC
	87-A40-739-080		ZENER,UZ2.7BSA
	87-017-149-080		ZENER,HZS6A2L
MAIN C.B			
C3	87-012-368-080		C-CAP,S 0.1-50 F
C4	87-012-368-080		C-CAP,S 0.1-50 F
C5	87-012-368-080		C-CAP,S 0.1-50 F
C6	87-012-368-080		C-CAP,S 0.1-50 F
C9	87-012-368-080		C-CAP,S 0.1-50 F
C10	87-012-368-080		C-CAP,S 0.1-50 F
C11	87-012-368-080		C-CAP,S 0.1-50 F
C12	87-012-368-080		C-CAP,S 0.1-50 F
C19	87-A12-036-000		CAP,E 2200-63 SMG
C20	87-A12-036-000		CAP,E 2200-63 SMG
C21	87-016-495-000		CAP,E 3300-25 M SMG<U>
C21	87-A10-520-000		CAP,E 3300-35 M SMG<LH>
C22	87-016-495-000		CAP,E 3300-25 M SMG<U>
C22	87-A10-520-000		CAP,E 3300-35 M SMG<LH>
C25	87-010-385-080		CAP, ELECT 220-25V
C26	87-010-247-080		CAP, ELECT 100-50V
C30	87-010-430-080		CAP, ELECT 100-63
C31	87-010-263-080		CAP, ELECT 100-10V
C32	87-010-197-080		CAP, CHIP 0.01-25 K B
C33	87-010-263-080		CAP, ELECT 100-10V<U>
C34	87-010-247-080		CAP, ELECT 100-50V
C35	87-010-382-080		CAP, ELECT 22-25V
C36	87-010-381-080		CAP, ELECT 330-16V
C38	87-010-197-080		CAP, CHIP 0.01-25 K B
C60	87-010-403-080		CAP, ELECT 3.3-50V
C61	87-010-260-080		CAP, ELECT 47-25V
C97	87-010-196-080		CHIP CAPACITOR,0.1-25
C101	87-010-183-080		C-CAP,S 2700P-50 B
C102	87-010-183-080		C-CAP,S 2700P-50 B
C103	87-010-544-080		CAP, ELECT 0.1-50V
C104	87-010-544-080		CAP, ELECT 0.1-50V
C105	87-010-178-080		CHIP CAP 1000P-50 K B
C106	87-010-178-080		CHIP CAP 1000P-50 K B
C107	87-010-404-080		CAP, ELECT 4.7-50V
C108	87-010-404-080		CAP, ELECT 4.7-50V
C111	87-010-391-080		CAP,E 10-35 SME
C112	87-010-391-080		CAP,E 10-35 SME
C113	87-010-405-080		CAP, ELECT 10-50V<LH>
C113	87-010-866-080		CAP, ELECT 10-63<U>
C114	87-010-405-080		CAP, ELECT 10-50V<LH>
C114	87-010-866-080		CAP, ELECT 10-63<U>
C119	87-010-197-080		C-CAP,S 0.01-25 K B<LH>
C119	87-010-194-080		C-CAP,S 0.047-25 Z F<U>
C120	87-010-197-080		C-CAP,S 0.01-25 K B<LH>
C120	87-010-194-080		C-CAP,S 0.047-25 Z F<U>
C125	87-012-368-080		C-CAP,S 0.1-50 F
C126	87-012-368-080		C-CAP,S 0.1-50 F
C127	87-012-368-080		C-CAP,S 0.1-50 F
C128	87-012-368-080		C-CAP,S 0.1-50 F
C129	87-010-191-080		C-CAP,S 0.015-50 F
C130	87-010-191-080		C-CAP,S 0.015-50 F
C131	87-010-197-080		CAP, CHIP 0.01-25 K B
C132	87-010-197-080		CAP, CHIP 0.01-25 K B
C133	87-010-186-080		CAP,CHIP 4700P-50 K
C140	87-010-182-080		C-CAP,S 2200P-50 B
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C235	87-010-408-080		CAP, ELECT 47-50V<U>
C236	87-010-408-080		CAP, ELECT 47-50V<U>
C239	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-010-178-080		C-CAP,S 1000-50 K B
C302	87-010-178-080		C-CAP,S 1000-50 K B
C303	87-010-178-080		C-CAP,S 1000-50 K B
C304	87-010-178-080		C-CAP,S 1000-50 K B
C307	87-010-263-080		CAP, ELECT 100-10V
C308	87-010-263-080		CAP, ELECT 100-10V
C309	87-010-318-080		C-CAP,S 47P-50 CH
C310	87-010-318-080		C-CAP,S 47P-50 CH
C313	87-010-188-080		CAP,CHIP 6800P-50 K
C314	87-010-188-080		CAP,CHIP 6800P-50 K
C315	87-010-263-080		CAP, ELECT 100-10V
C317	87-010-546-080		CAP, ELECT 0.33-50V
C318	87-010-546-080		CAP, ELECT 0.33-50V
C326	87-010-198-080		CAP, CHIP 0.022-25 K
C327	87-012-368-080		C-CAP,S 0.1-50 F
C360	87-010-401-080		CAP, ELECT 1-50V
C399	87-012-140-080		C-CAP,S 470P-50 J
C401	87-010-544-080		CAP, ELECT 0.1-50V
C402	87-010-544-080		CAP, ELECT 0.1-50V
C403	87-010-321-080		CHIP CAPACITOR,82P(J)
C404	87-010-321-080		CHIP CAPACITOR,82P(J)
C405	87-010-197-080		CAP, CHIP 0.01-25 K B
C406	87-010-197-080		CAP, CHIP 0.01-25 K B
C407	87-010-197-080		CAP, CHIP 0.01-25 K B
C408	87-010-197-080		CAP, CHIP 0.01-25 K B
C409	87-010-182-080		C-CAP,S 2200P-50 B

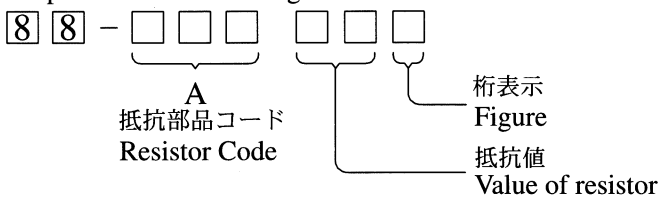
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C410	87-010-182-080		C-CAP,S 2200P-50 B
C411	87-010-405-080		CAP, ELECT 10-50V
C412	87-010-405-080		CAP, ELECT 10-50V
C452	87-010-382-080		CAP, ELECT 22-25V
C453	87-010-183-080		C-CAP,S 2700P-50 B
C454	87-010-183-080		C-CAP,S 2700P-50 B
C455	87-010-183-080		C-CAP,S 2700P-50 B
C456	87-010-197-080		CAP, CHIP 0.01-25 K B
C460	87-010-196-080		CHIP CAPACITOR,0.1-25
C461	87-012-158-080		C-CAP,S 390P-50 CH
C462	87-012-158-080		C-CAP,S 390P-50 CH
C605	87-010-179-080		CAP,CHIP S 1200P-50 K
C606	87-010-179-080		CAP,CHIP S 1200P-50 K
C609	87-010-213-080		C-CAP,S 0.015-50 B
C610	87-010-213-080		C-CAP,S 0.015-50 B
C611	87-010-545-080		CAP, ELECT 0.22-50V
C612	87-010-545-080		CAP, ELECT 0.22-50V
C613	87-010-545-080		CAP, ELECT 0.22-50V
C614	87-010-545-080		CAP, ELECT 0.22-50V
C615	87-010-154-080		CAP CHIP 10P-50 CH
C616	87-010-385-080		CAP, ELECT 220-25V
C617	87-010-385-080		CAP, ELECT 220-25V
C618	87-010-405-080		CAP, ELECT 10-50V
C630	87-016-669-080		C-CAP,S 0.1-25 K B
C631	87-010-185-080		C-CAP,S 3900P-50 B
C632	87-010-185-080		C-CAP,S 3900P-50 B
C633	87-016-369-080		C-CAP,S 0.033-25 K B
C634	87-016-369-080		C-CAP,S 0.033-25 K B
C669	87-010-322-080		C-CAP,S 100P-50 CH
C670	87-010-322-080		C-CAP,S 100P-50 CH
C677	87-010-197-080		CAP, CHIP 0.01-25 K B
C771	87-010-263-080		CAP, ELECT 100-10V
C772	87-010-197-080		CAP, CHIP 0.01-25 K B
C782	87-010-197-080		CAP, CHIP 0.01-25 K B
C783	87-010-197-080		CAP, CHIP 0.01-25 K B
C784	87-010-197-080		CAP, CHIP 0.01-25 K B
C785	87-010-197-080		CAP, CHIP 0.01-25 K B
C786	87-010-197-080		CAP, CHIP 0.01-25 K B
C788	87-010-149-080		C-CAP,S 5P-50 CH
C789	87-A12-052-080		C-CAP,S 0.033-25 J B
C790	87-A12-052-080		C-CAP,S 0.033-25 J B
C791	87-010-196-080		CHIP CAPACITOR,0.1-25
C792	87-010-197-080		CAP, CHIP 0.01-25 K B
C793	87-010-404-080		CAP, ELECT 4.7-50V
C795	87-010-197-080		CAP, CHIP 0.01-25 K B
C796	87-010-197-080		CAP, CHIP 0.01-25 K B
C797	87-010-405-080		CAP, ELECT 10-50V
C798	87-010-197-080		CAP, CHIP 0.01-25 K B
C799	87-010-407-080		CAP, ELECT 33-50V
C800	87-012-369-080		C-CAP,S 0.047-50F
C801	87-010-403-080		CAP, ELECT 3.3-50V
C802	87-010-194-080		CAP, CHIP 0.047-25 Z F
C803	87-010-198-080		CAP, CHIP 0.022-25 K B
C804	87-010-263-080		CAP, ELECT 100-10V
C807	87-010-400-080		CAP, ELECT 0.47-50V
C808	87-010-401-080		CAP, ELECT 1-50V
C809	87-010-401-080		CAP, ELECT 1-50V
C810	87-010-196-080		CHIP CAPACITOR,0.1-25
C814	87-010-197-080		CAP, CHIP 0.01-25 K B
C815	87-010-403-080		CAP, ELECT 3.3-50V
C816	87-010-403-080		CAP, ELECT 3.3-50V
C821	87-010-405-080		CAP, ELECT 10-50V
C823	87-010-177-080		C-CAP,S 820P-50 SL
C824	87-010-405-080		CAP, ELECT 10-50V
C825	87-010-596-080		CAP, S 0.047-16
C842	87-010-197-080		CAP, CHIP 0.01-25 K B
C844	87-010-197-080		CAP, CHIP 0.01-25 K B
C850	87-010-408-080		CAP, ELECT 47-50V
C851	87-010-197-080		CAP, CHIP 0.01-25 K B
C852	87-010-197-080		CAP, CHIP 0.01-25 K B
C853	87-010-197-080		CAP, CHIP 0.01-25 K B
C858	87-010-196-080		CHIP CAPACITOR,0.1-25
C859	87-010-196-080		CHIP CAPACITOR,0.1-25
C860	87-010-197-080		CAP, CHIP 0.01-25 K B
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C961	87-010-152-080		C-CAP,S 8P-50 CH
C963	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C971	87-010-381-080		CAP, ELECT 330-16V
C972	87-010-404-080		CAP, ELECT 4.7-50V
C973	87-010-197-080		CAP, CHIP 0.01-25 K B
C974	87-010-197-080		CAP, CHIP 0.01-25 K B
C979	87-010-322-080		C-CAP,S 100P-50 CH
C981	87-010-260-080		CAP, ELECT 47-25V
C982	87-010-196-080		CHIP CAPACITOR,0.1-25
C983	87-010-197-080		CAP, CHIP 0.01-25 K B
C984	87-010-197-080		CAP, CHIP 0.01-25 K B
C987	87-010-197-080		CAP, CHIP 0.01-25 K B
C991	87-010-312-080		C-CAP,S 15P-50 CH
C992	87-010-312-080		C-CAP,S 15P-50 CH
C993	87-010-178-080		CHIP CAP 1000P-50 K B
C995	87-010-178-080		CHIP CAP 1000P-50 K B
C997	87-010-196-080		CHIP CAPACITOR,0.1-25
C998	87-010-260-080		CAP, ELECT 47-25V
C999	87-A11-155-080		CAP,TC U 0.01-16 Z F
CF831	87-008-261-010		FILTER, SFE10.7MA5-A
CF832	87-008-261-010		FILTER, SFE10.7MA5-A
CN301	87-A60-620-010		CONN,3P V 2MM JMT
CN351	87-A60-625-010		CONN,8P V 2MM JMT
CN601	87-099-719-010		CONN,30P TYK-B(X)
CN602	87-A60-131-010		CONN,6P V FE
CNA1	8A-NF8-653-010		CONN ASSY,9P TID-A(480)<LH>
FC602	88-906-251-110		FF-CABLE,6P 1.25
FFE831	A8-8ZA-191-030		8ZA-1 YFEUNM
J202	87-A60-488-010		JACK,DIA6.3 BLK ST W/SW KM16AT
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)
J205	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN<U>
J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
J831	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02
L101	87-003-383-010		COIL,1UH-S
L102	87-003-383-010		COIL,1UH-S
L451	87-007-342-010		COIL,OSC 85K BIAS
L801	87-A50-540-010		COIL,FM DET(TOK)
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)
L811	87-005-847-080		COIL,2.2UH(CECS)
L832	87-005-847-080		COIL,2.2UH(CECS)
L951	8A-NF8-667-010		COIL,AM PACK 4(TOK)
R129	87-A00-669-080		RES,M/F 0.22-2W J RA<U>
R130	87-A00-669-080		RES,M/F 0.22-2W J RA<U>
R131	87-A00-257-080		RES,M/F 0.15-1W J<LH>
R131	87-A00-669-080		RES,M/F 0.22-2W J RA<U>
R132	87-A00-257-080		RES,M/F 0.15-1W J<LH>
R132	87-A00-669-080		RES,M/F 0.22-2W J RA<U>
R143	87-A00-440-050		RES,220-1/2W J RP
R144	87-A00-440-050		RES,220-1/2W J RP
R145	87-A00-440-050		RES,220-1/2W J RP
R146	87-A00-440-050		RES,220-1/2W J RP
R790	87-010-197-080		CAP, CHIP 0.01 DM
R991	87-010-322-080		C-CAP,S 100P-50 CH
R993	87-010-322-080		C-CAP,S 100P-50 CH
R995	87-010-322-080		C-CAP,S 100P-50 CH
SFR451	87-A90-432-080		SFR,30K H NVZ6TLTA
SFR452	87-A90-432-080		SFR,30K H NVZ6TLTA
W99	8A-NF9-609-010		F-CABLE,9P 2.5 480MM<U>
WH1	87-A90-510-010		HLDR,WIRE 2.5-9P
X991	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

FRONT C.B

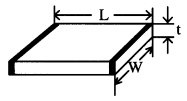
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C101	87-010-196-080		CHIP CAPACITOR,0.1-25
C102	87-010-196-080		CHIP CAPACITOR,0.1-25
C103	87-010-498-040		CAP,E 10-16 M 5L
C104	87-010-196-080		CHIP CAPACITOR,0.1-25
C107	87-010-493-040		CAP,E 0.47-50 M 5L
C108	87-A11-606-080		C-CAP,S 0.22-25 B
C153	87-010-198-080		CAP, CHIP 0.022-25 K B
C154	87-010-246-040		CAP,E 47-35 SME
C155	87-010-404-040		CAP,E 4.7-50 SME
C156	87-010-404-040		CAP,E 4.7-50 SME
C361	87-010-178-080		CHIP CAP 1000P-50 K B
C362	87-010-178-080		CHIP CAP 1000P-50 K B
C371	87-010-178-080		CHIP CAP 1000P-50 K B
C372	87-010-178-080		CHIP CAP 1000P-50 K B
C601	87-010-382-040		CAP,E 22-25 SME
C801	87-010-195-080		C-CAP,S 0.068-25 F
C802	87-010-195-080		C-CAP,S 0.068-25 F
C803	87-010-402-040		CAP,E 2.2-50 SME
C804	87-010-402-040		CAP,E 2.2-50 SME
C805	87-010-196-080		CHIP CAPACITOR,0.1-25
C806	87-010-196-080		CHIP CAPACITOR,0.1-25
C901	87-010-322-080		C-CAP,S 100P-50 CH
C902	87-010-322-080		C-CAP,S 100P-50 CH
C903	87-010-322-080		C-CAP,S 100P-50 CH
C904	87-010-322-080		C-CAP,S 100P-50 CH
C905	87-010-322-080		C-CAP,S 100P-50 CH
C906	87-010-322-080		C-CAP,S 100P-50 CH
C907	87-010-322-080		C-CAP,S 100P-50 CH
C908	87-010-322-080		C-CAP,S 100P-50 CH
C909	87-010-322-080		C-CAP,S 100P-50 CH
C910	87-010-322-080		C-CAP,S 100P-50 CH
C911	87-010-178-080		CHIP CAP 1000P-50 K B
C912	87-010-196-080		CHIP CAPACITOR,0.1-25
C913	87-010-248-040		CAP,E 220-10 SME
C914	87-010-248-040		CAP,E 220-10 SME
C915	87-010-196-080		CHIP CAPACITOR,0.1-25
C916	87-010-196-080		CHIP CAPACITOR,0.1-25
C917	87-010-196-080		CHIP CAPACITOR,0.1-25
C919	87-010-197-080		CAP, CHIP 0.01-25 K B
C920	87-010-194-080		C-CAP,S 0.047-25 Z F
C921	87-010-186-080		CAP,CHIP 4700P-50 K B
C951	87-010-312-080		C-CAP,S 15P-50 CH
C952	87-012-155-080		C-CAP 180P-50CH
C953	87-012-140-080		CAP 470P-50 CH
C961	87-010-378-040		CAP,E 10-16 M SME
C962	87-012-157-080		C-CAP,S 330P-50 CH
C963	87-010-196-080		CHIP CAPACITOR,0.1-25
CN104	87-A60-057-010		CONN,11P V 9604S-11C
CN701	87-099-720-010		CONN,30P BLK TYK-B(P)
CN731	87-099-015-010		CONN,13P V BLK 6216V
FC104	88-911-101-110		FF-CABLE,11P 1.25
FC731	88-913-301-110		FF-CABLE,13P-1.25
FL901	8A-NF9-605-010		FL,HNA-10SS12
L951	87-A50-434-010		COIL,CLK 4.19M(TOKO)
LED201	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED202	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED204	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED205	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED209	87-A40-317-080		LED,SLR-342VCT31 RED
LED210	87-A40-619-040		LED,SLR-56PT-T31-W GRN
S301	87-A91-024-180		SW,TACT KSH0611BT
S302	87-A91-024-180		SW,TACT KSH0611BT
S303	87-A91-024-180		SW,TACT KSH0611BT
S304	87-A91-024-180		SW,TACT KSH0611BT
S305	87-A91-024-180		SW,TACT KSH0611BT
S306	87-A91-024-180		SW,TACT KSH0611BT
S307	87-A91-024-180		SW,TACT KSH0611BT
S308	87-A91-024-180		SW,TACT KSH0611BT
S309	87-A91-024-180		SW,TACT KSH0611BT
S321	87-A91-024-180		SW,TACT KSH0611BT
S322	87-A91-024-180		SW,TACT KSH0611BT
S323	87-A91-024-180		SW,TACT KSH0611BT
S324	87-A91-024-180		SW,TACT KSH0611BT
S325	87-A91-024-180		SW,TACT KSH0611BT
S326	87-A91-024-180		SW,TACT KSH0611BT
S341	87-A91-024-180		SW,TACT KSH0611BT
S342	87-A91-024-180		SW,TACT KSH0611BT
S343	87-A91-024-180		SW,TACT KSH0611BT
S344	87-A91-024-180		SW,TACT KSH0611BT
S345	87-A91-024-180		SW,TACT KSH0611BT
S346	87-A91-024-180		SW,TACT KSH0611BT
S347	87-A91-024-180		SW,TACT KSH0611BT
S348	87-A91-024-180		SW,TACT KSH0611BT
S349	87-A91-024-180		SW,TACT KSH0611BT
S350	87-A91-024-180		SW,TACT KSH0611BT
S361	87-A91-633-010		SW,RTRY XRE012103PVB25FINA 1-2
S371	87-A91-632-010		SW,RTRY XRE012103PVB25FINB 1-2
			PT C.B<LH>
C1	87-010-387-080		CAP,E 470-25 SME
C31	87-010-403-080		CAP, ELECT 3.3-50V
CN1	87-A61-110-010		CONN,9P V TID-A
⚠ PT1	8A-NF9-615-010		PT,ANF-9 LH
⚠ PT2	8A-NF8-673-010		PT,SUB ANF-8 (H)KAMI
⚠ RY1	87-A91-339-010		RELAY,AC DC12V G5PA-2
⚠ S1	87-A90-165-010		SW,SL 1-2-3 SWS2301
⚠ T1	87-A60-317-010		TERMINAL, 1P MSC
⚠ T2	87-A60-317-010		TERMINAL, 1P MSC
			PT C.B<U>
C183	87-010-387-080		CAP,E 470-25 SME
C184	87-010-403-080		CAP, ELECT 3.3-50V
⚠ PT1	8A-NF9-612-010		PT,ANF-9 U
⚠ PT181	8A-NF8-661-010		PT,SUB ANF-8 (U)
⚠ RY181	87-A91-418-010		RELAY,AC12V G5PA-1-M
⚠ T181	87-A60-317-010		TERMINAL, 1P MSC
⚠ T182	87-A60-317-010		TERMINAL, 1P MSC
WH181	87-A90-510-010		HLDR,WIRE 2.5-9P
			DECK C.B
HL1	8Z-ZM3-214-010		HLDR,IC
CN1	87-099-753-010		CONN,11P H 9604
SFR1	87-024-581-010		SFR,3.3K DIA6V K0A
SW1	87-A90-673-010		SW,MICRO ESE11SH1C
SW2	87-A91-500-010		SW,MICRO MPU11470MLB0
SW3	87-A91-500-010		SW,MICRO MPU11470MLB0
SW4	87-A91-500-010		SW,MICRO MPU11470MLB0
SW5	87-A90-673-010		SW,MICRO ESE11SH1C

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

E C B

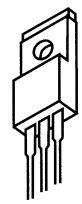
CD1585BC
CSA952K
KTA1266GR
KTC3198GR

E C B

2SC3331

E C B

CSC4115BC

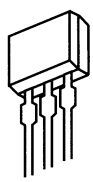


B C E

2SB1370

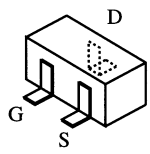
E C B

DTC114ES
KTC3199GR

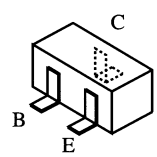


S D G

2SJ460
2SK2541



2SK2158

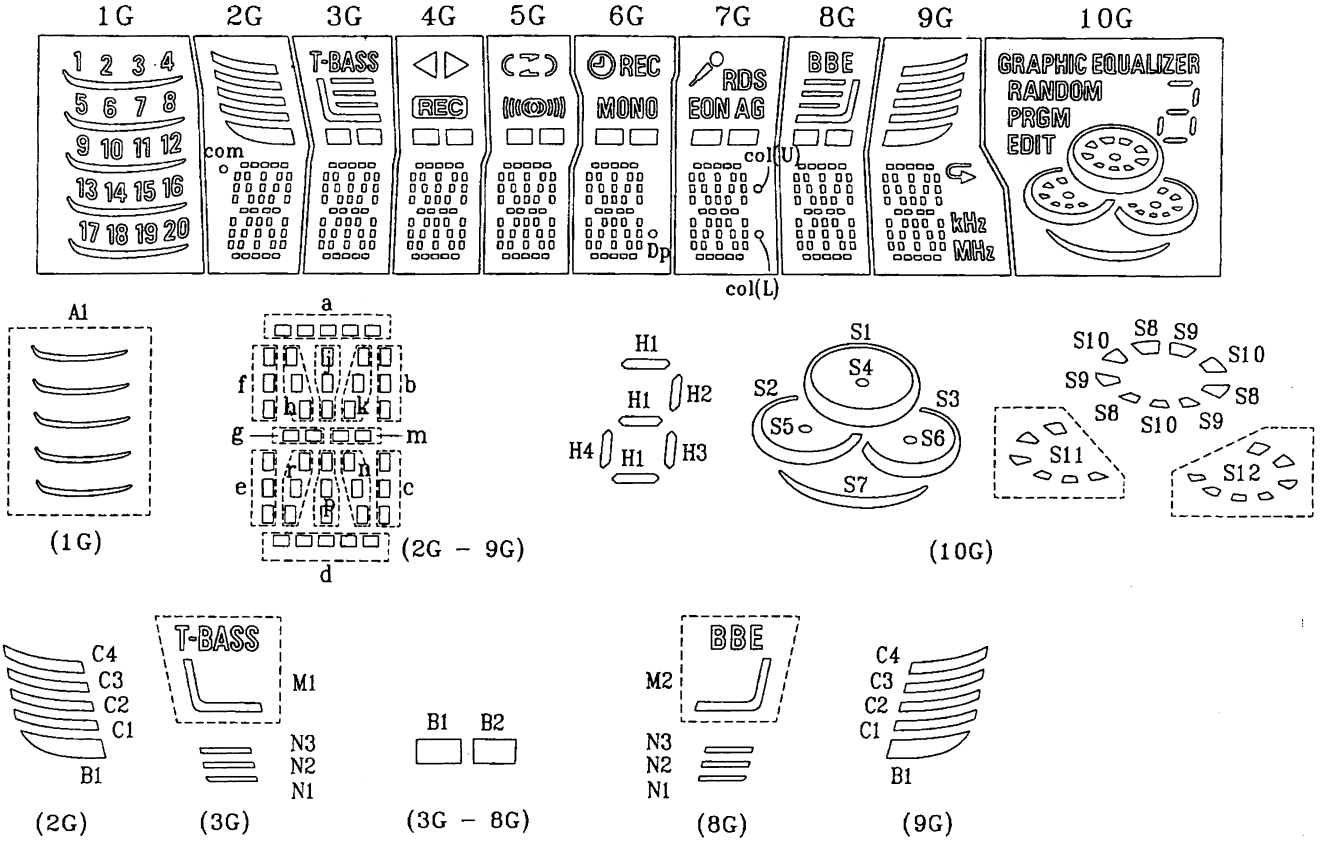


2SA1235F
2SC2714
2SC3052F
CMBT5401
CMBT5551

DTC114EK
RT1N141C
RT1N441C
RT1P141C
RT1P144C

FL (HNA-10SS12) GRID ASSIGNMENT AND ANODE CONNECTION

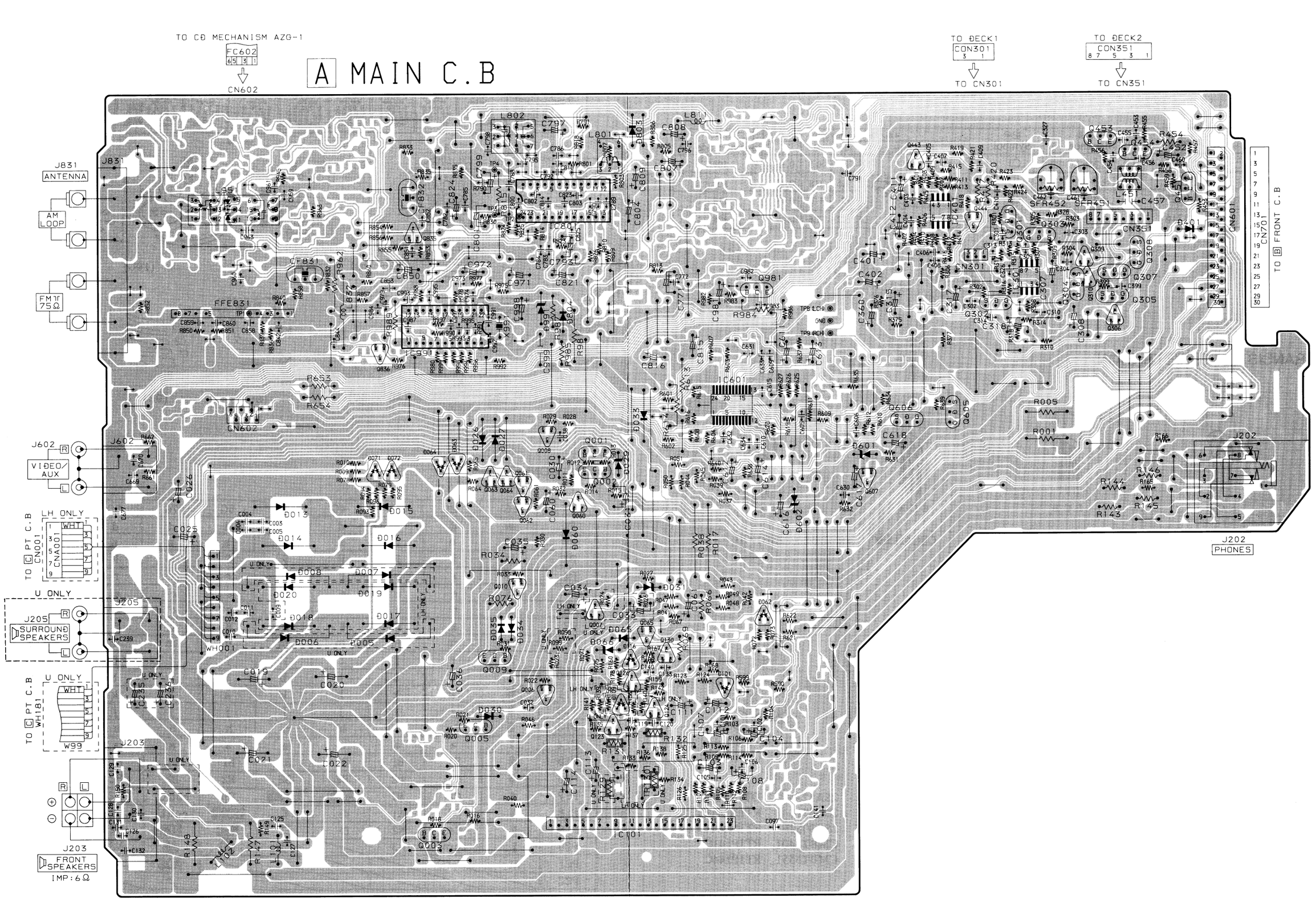
GRID ASSIGNMENT

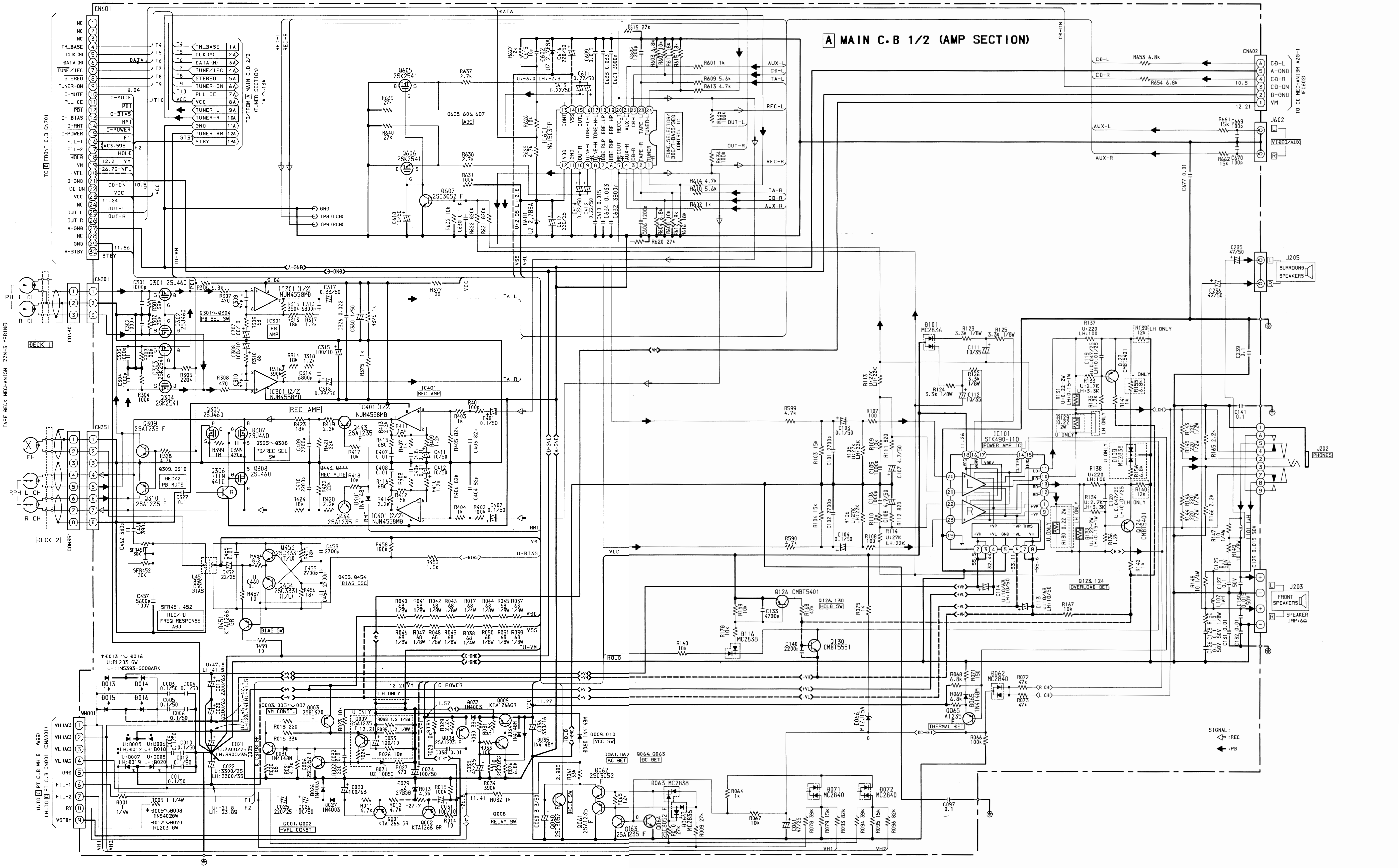


ANODE CONNECTION

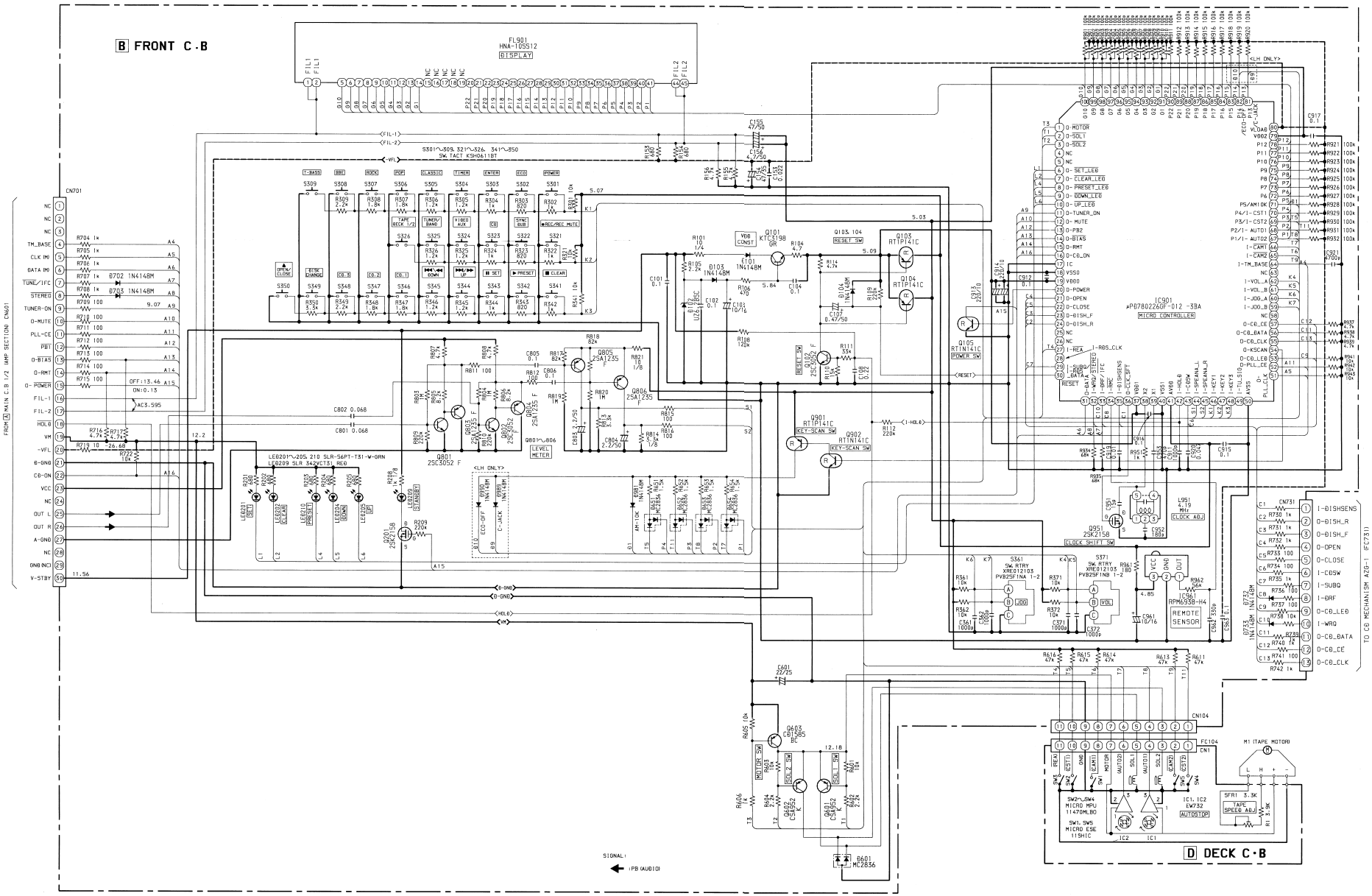
	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	20	d	d	d	d	d	d	d	d	S1
P2	19	n	n	n	n	n	n	n	n	S2
P3	18	p	p	p	p	p	p	p	p	S3
P4	17	r	r	r	r	r	r	r	r	S4
P5	16	e	e	e	e	e	e	e	e	S5
P6	15	c	c	c	c	c	c	c	c	S6
P7	14	g	g	g	g	g	g	g	g	S7
P8	13	m	m	m	m	m	m	m	m	S8
P9	12	f	f	f	f	f	f	f	f	S9
P10	11	b	b	b	b	b	b	b	b	S10
P11	10	k	k	k	k	k	k	k	k	S11
P12	9	j	j	j	j	j	j	j	j	S12
P13	8	h	h	h	h	h	h	h	h	EDIT
P14	7	a	a	a	a	a	a	a	a	PRGM
P15	6	B1	B1	B1	B1	B1	B1	B1	B1	RANDOM
P16	5	C1	B2	B2	B2	B2	B2	B2	C1	GRAPHIC EQUALIZER
P17	4	C2	M1	REC		Dp	col(U)	M2	C2	H1
P18	3	C3	N1	◁		MONO	col(L)	N1	C3	H2
P19	2	C4	N2	▷		REC	EON	N2	C4	H3
P20	1	com	N3				AG	N3		H4
P21	A1						RDS		kHz	
P22									MHz	

A MAIN C.B

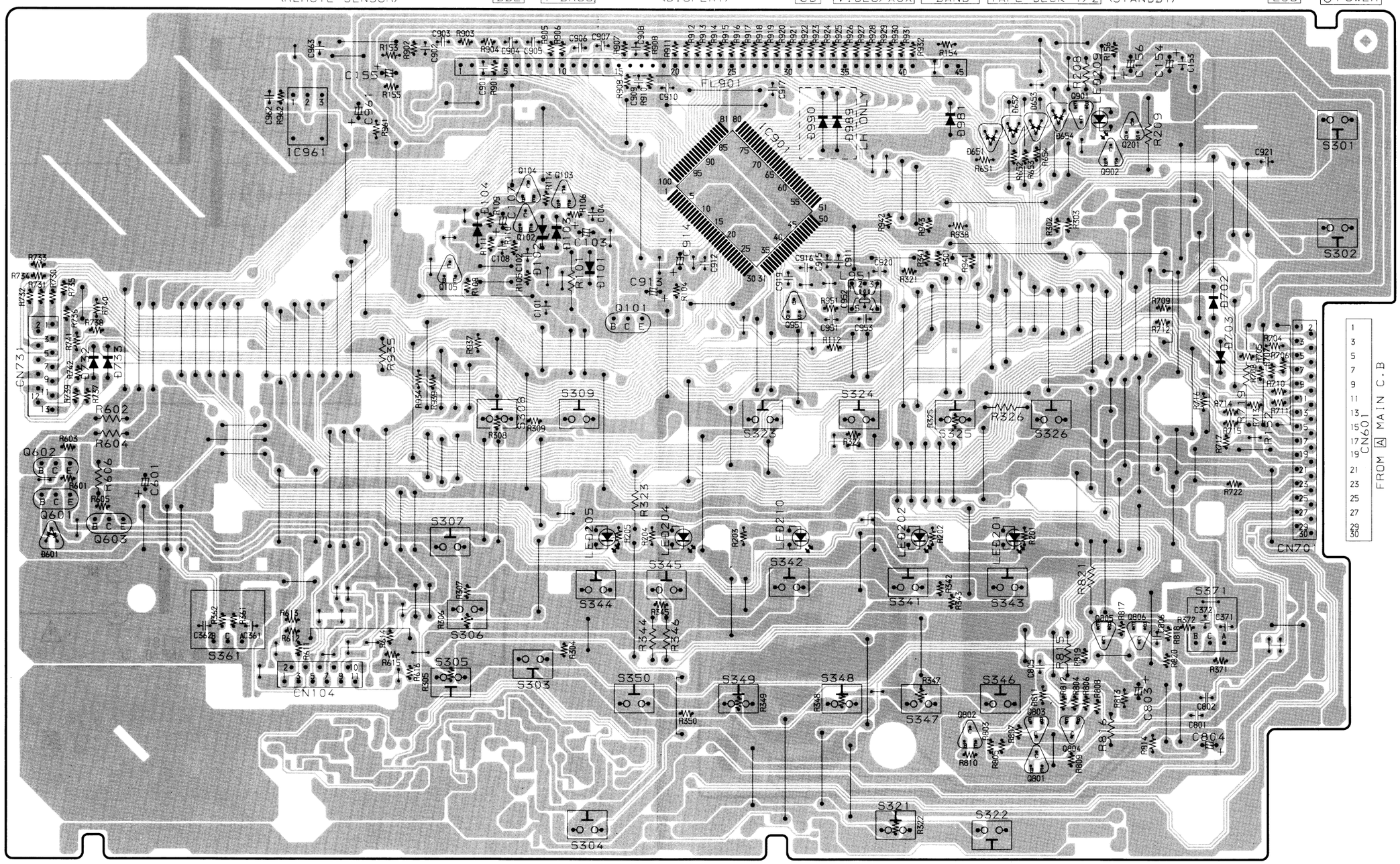

TO CD MECHANISM AZG-1
FC602
CN602
TO DECK1
CON301
TO CN301
TO DECK2
CON351
TO CN351
J831
ANTENNA
AM LOOP
FM 75Ω
J602
VIDEO/ AUX
J205
SURROUND SPEAKERS
J203
FRONT SPEAKERS
IMP:6Ω
J202
PHONES
TO B FRONT C.B
CN701
TO C PT C.B
CN001
LH ONLY
U ONLY
WH001
WH181
W99
IC101
IC201
IC301
IC401
IC501
IC601
IC801
IC901

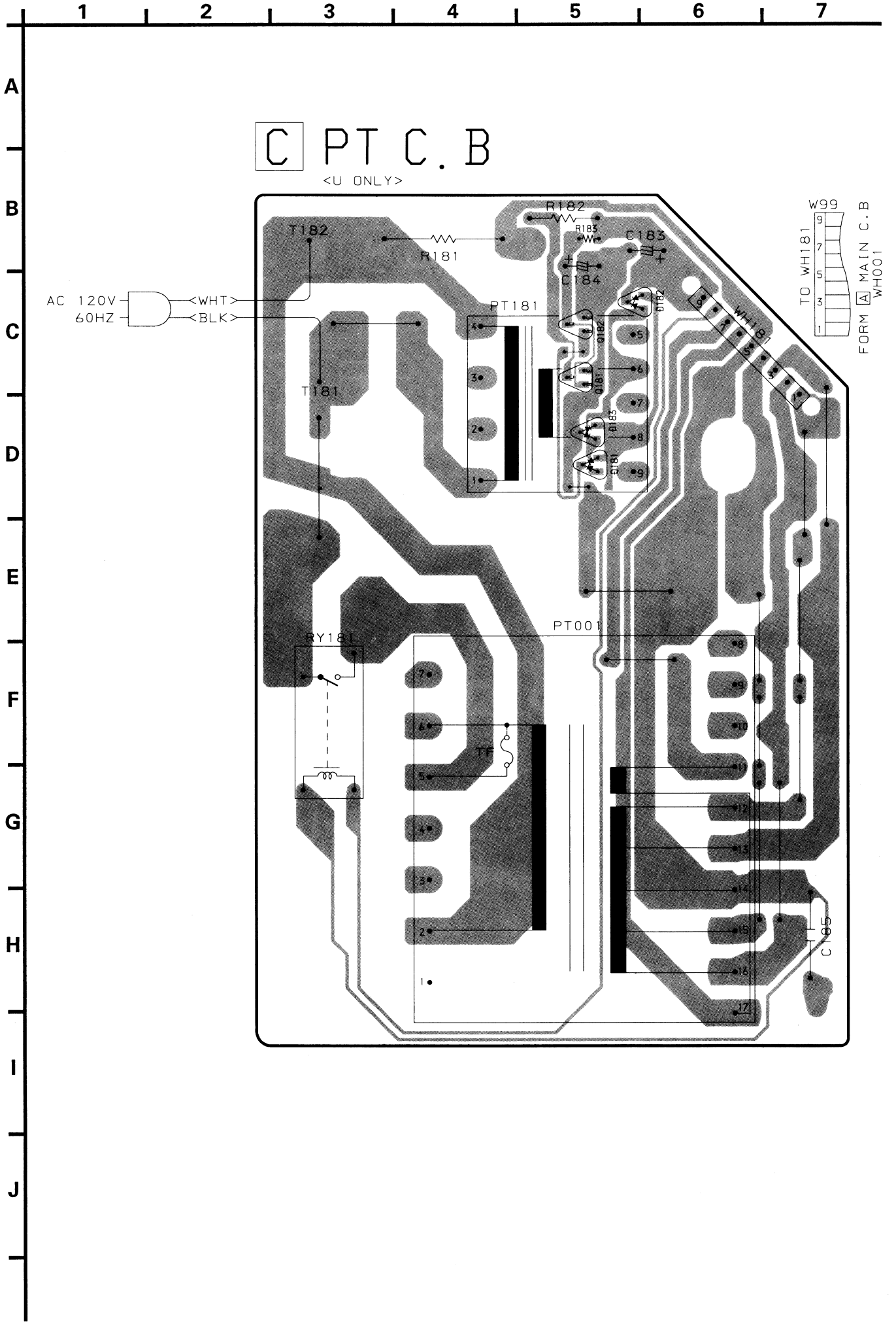

A MAIN C.B 1/2 (AMP SECTION)
CN601
TO B FRONT C.B CN701
TO/FROM A MAIN C.B 2/2 (TUNER SECTION) 1A ~13A
IC601 M61503FP
FUNC.SELECTOR/ BBE/T-BASS/GEQ CONTROL IC
Q605, 606, 607 AGC
CN602
TO CD MECHANISM AZG-1 (FC602)
J602 VIDEO/AUX
J205 SURROUND SPEAKERS
TAPE DECK MECHANISM (ZZM-3 YPRINF)
DECK 1
DECK 2
IC301 PB AMP
IC401 REC AMP
Q301~Q304 PB SEL SW
Q305~Q308 PB/REC SEL SW
Q309, Q310 DECK2 PB MUTE
Q443, Q444 REC MUTE
Q453, Q454 BIAS OSC
SFR451, 452 REC/PB FREQ RESPONSE ADJ
BIAS SW
IC101 STK490-110 POWER AMP IC
Q123, 124 OVERLOAD DET
J202 PHONES
J203 FRONT SPEAKERS SPEAKER IMP:6Ω
Q126, 130 HOLD SW
Q003, 005 ~ 007 VM CONST.
Q001, Q002 -VFL CONST.
Q008 RELAY SW
Q009, 010 VCC SW
Q061, 062 AC DET
Q064, Q063 DC DET
Q065 THERMAL DET
U:TO C PT C.B WH181 (W99)
LH:TO C PT C.B CN001 (CNA001)
SIGNAL: :REC :PB

SCHEMATIC DIAGRAM – 2 (FRONT)

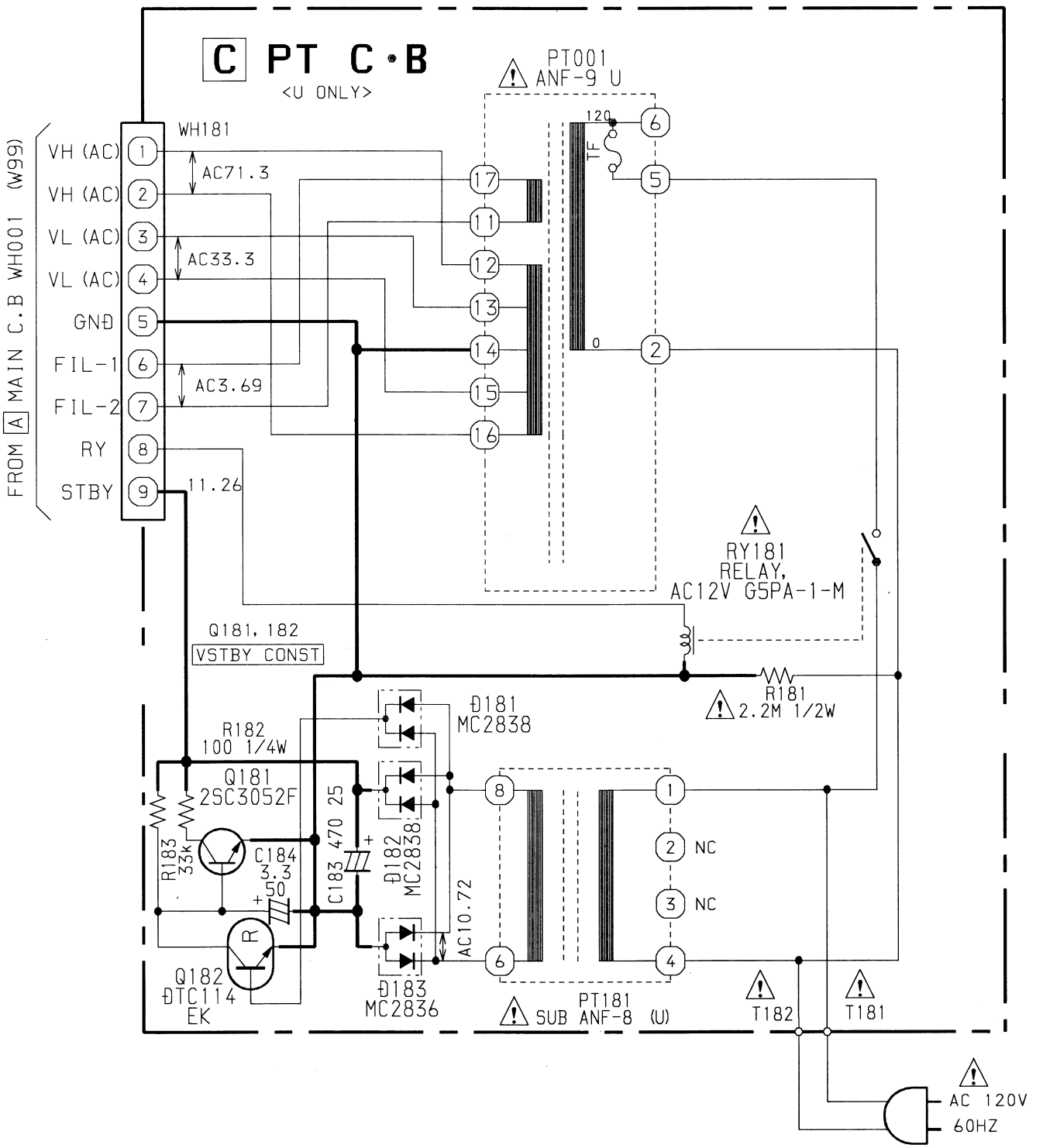


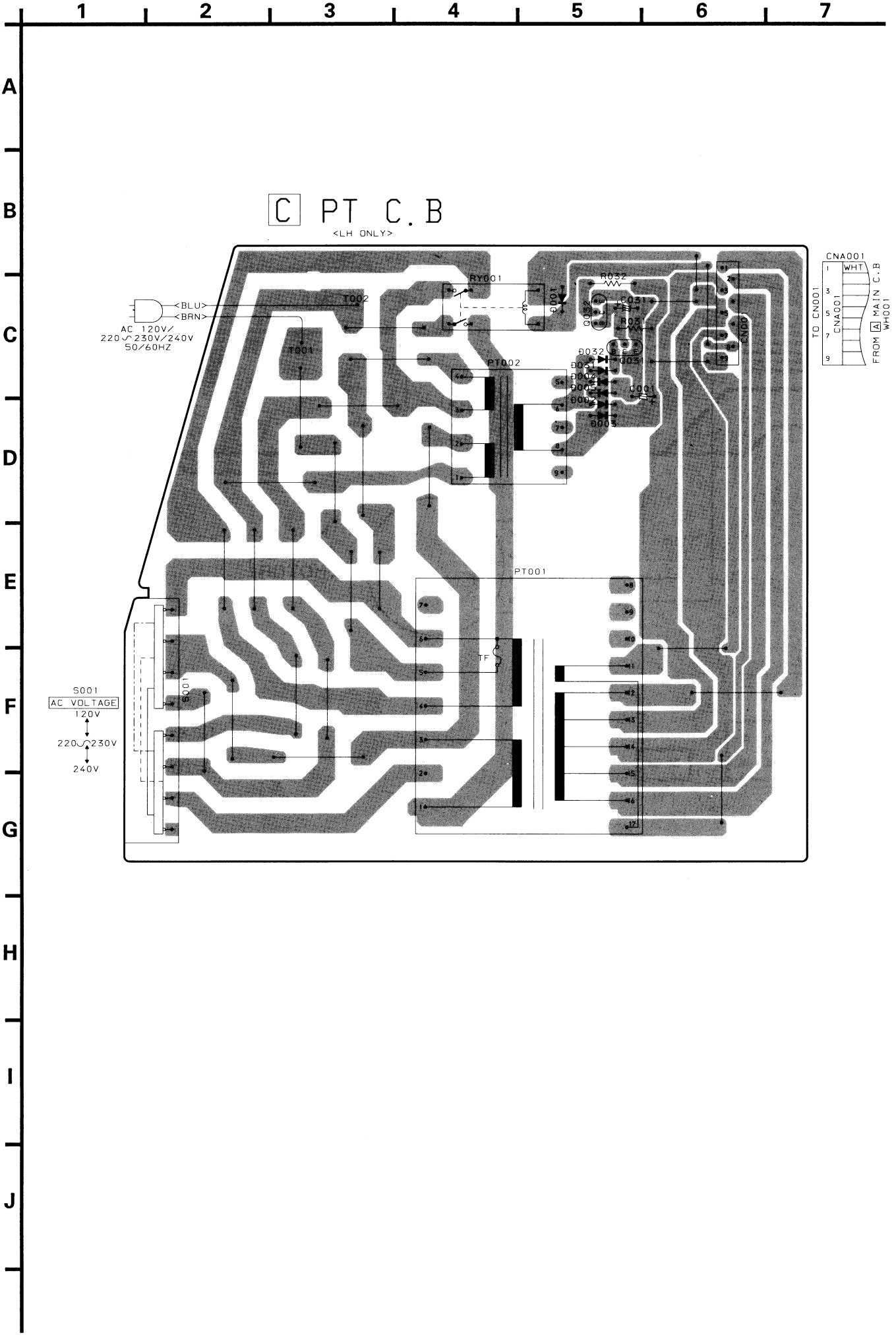
B FRONT C.B


IC961 (REMOTE SENSOR)
S308 BBE
S309 T-BASS
FL901 (DISPLAY)
S323 CD
S324 VIDEO/AUX
S325 TUNER/BAND
S326 TAPE DECK 1/2
LED209 (STANDBY)
S302 ECO
S301 POWER
IC961
FL901
IC901
S301
S302
S303
S304
S305
S306
S307
S309
S321
S322
S323
S324
S325
S326
S341
S342
S343
S344
S345
S346
S347
S348
S349
S350
S361
S371
CN104
CN701
CN731
FC731
TO CD MECHANISM (AZG-1)
FROM A MAIN C.B
CN601
TO CN104
FC104
TO D DECK C.B
CN1
S361 MULTI JOG
GRAPHIC EQUALIZER
S307 ROCK
S306 POP
S305 CLASSIC
S303 ENTER
TUNING
LED205 S344 ▶▶|/▶▶ UP
LED204 S345 |◀◀/◀◀ DOWN
S304 TIMER
S350 ▲ OPEN/CLOSE
S349 DISC CHANGE
LED210 S342 ▶ PRESET
LED202 S341 ■ CLEAR
LED201 S343 ❚❚ SET
DISC DIRECT PLAY
S348 CD.3
S347 CD.2
S346 CD.1
S321 ● REC/REC MUTE
S322 SYNC DUB
S371 VOLUME

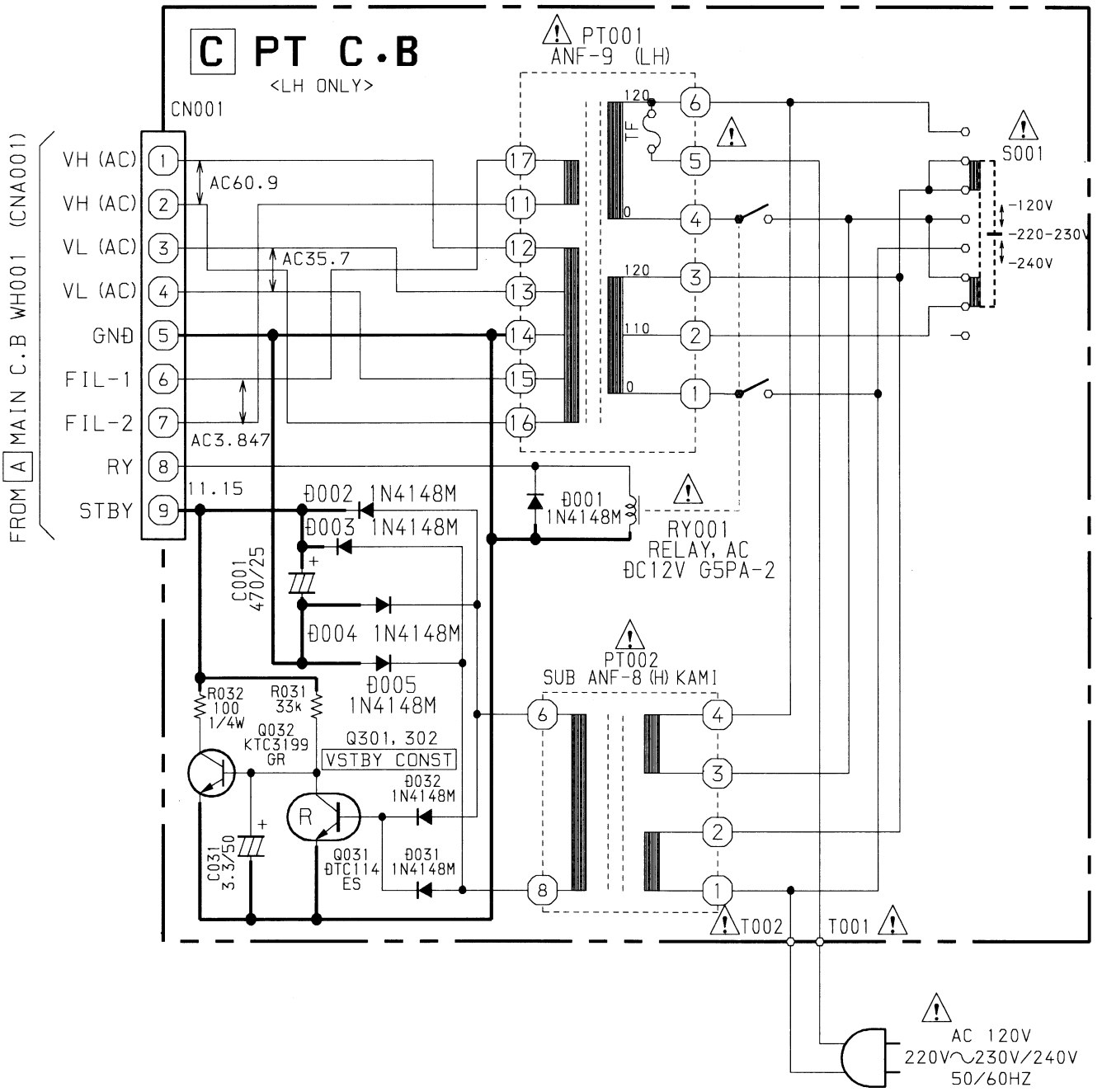

C PT C.B
<U ONLY>
AC 120V
60HZ
<WHT>
<BLK>
T182
R181
R182
R183
C183
C184
PT181
T181
Q182
Q181
Q183
Q181
WH181
W99
TO WH181
FORM A MAIN C.B
WH001
RY181
PT001
TF
C185

SCHEMATIC DIAGRAM – 3 (PT : U)

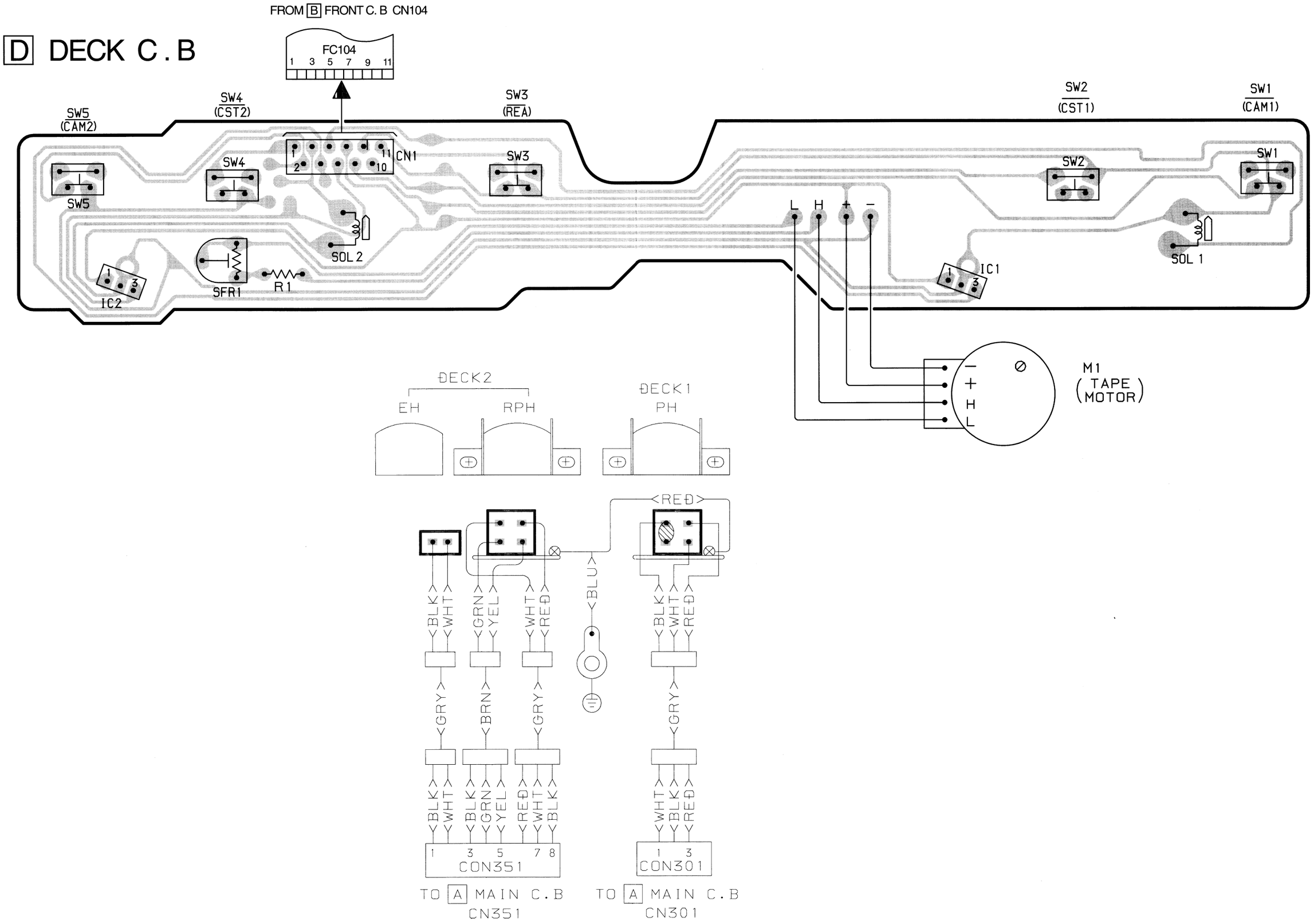



1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
C PT C.B
<LH ONLY>
<BLU>
<BRN>
AC 120V/
220~230V/240V
50/60HZ
T002
T001
RY001
D001
R032
C031
R031
Q032
CN001
D032
D031
D002
D003
D004
D005
C001
PT002
PT001
TF
S001
AC VOLTAGE
120V
220~230V
240V
CNA001
WHT
TO CN001
FROM A MAIN C.B
WH001

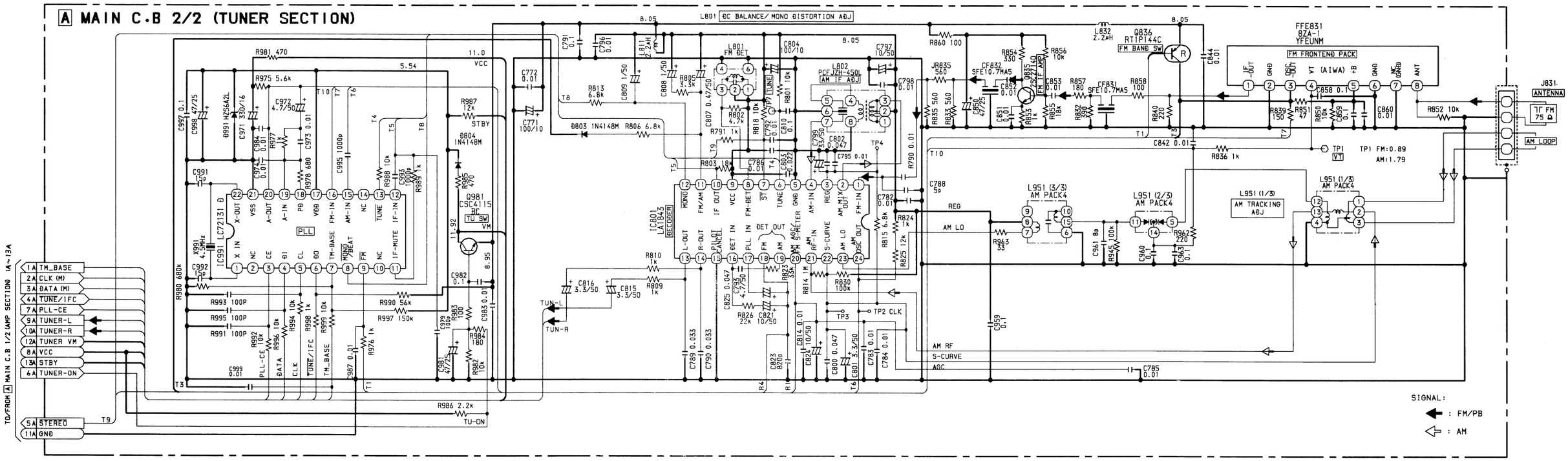
SCHEMATIC DIAGRAM – 4 (PT : LH)



D DECK C.B

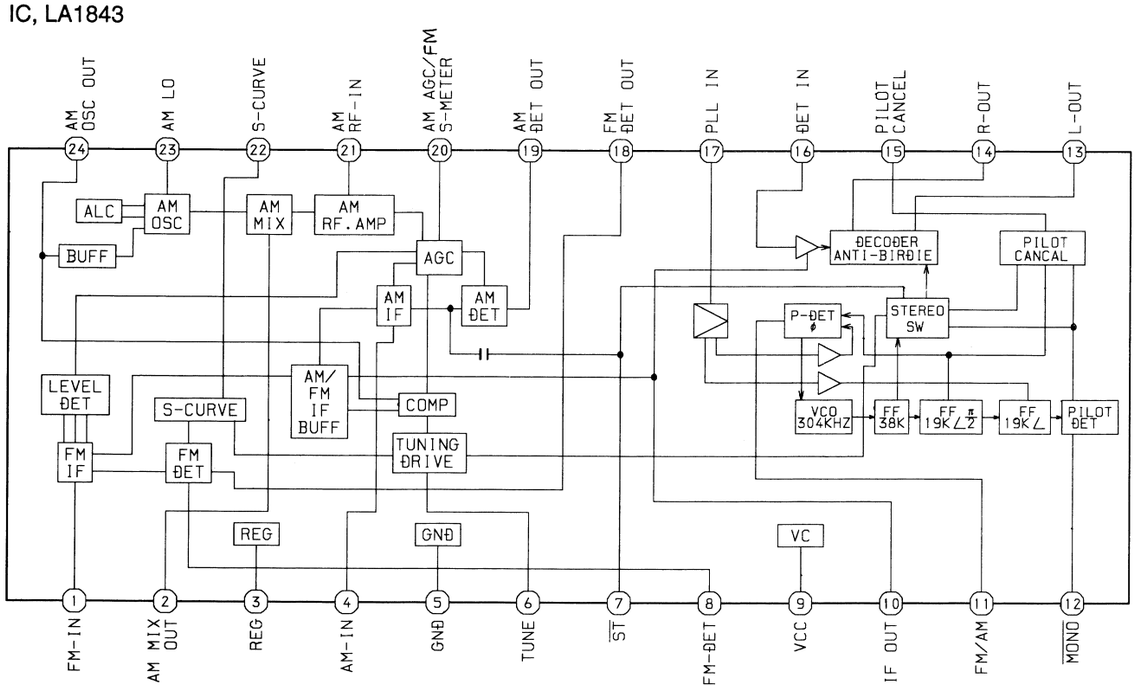

FROM B FRONT C.B CN104
FC104
1 3 5 7 9 11
SW5 (CAM2)
SW4 (CST2)
SW3 (REA)
SW2 (CST1)
SW1 (CAM1)
CN1
SW5
SW4
SW3
SW2
SW1
SOL 2
SOL 1
SFR1
R1
IC2
IC1
L H + −
M1 (TAPE MOTOR)
DECK2
EH
RPH
DECK1
PH
RED
BLK WHT
GRN YEL
WHT RED
BLU
GRY
BRN
CON351
CON301
TO A MAIN C.B CN351
TO A MAIN C.B CN301

SCHEMATIC DIAGRAM – 5 (MAIN 2 / 2 : TUNER)

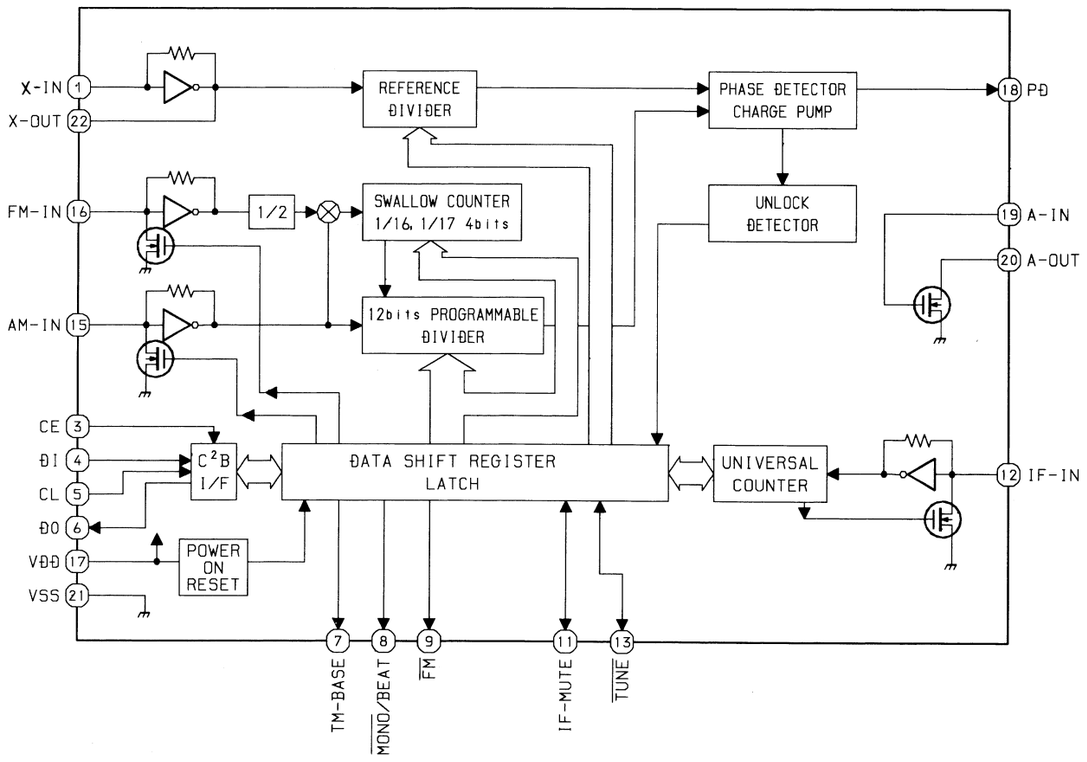


IC BLOCK DIAGRAM

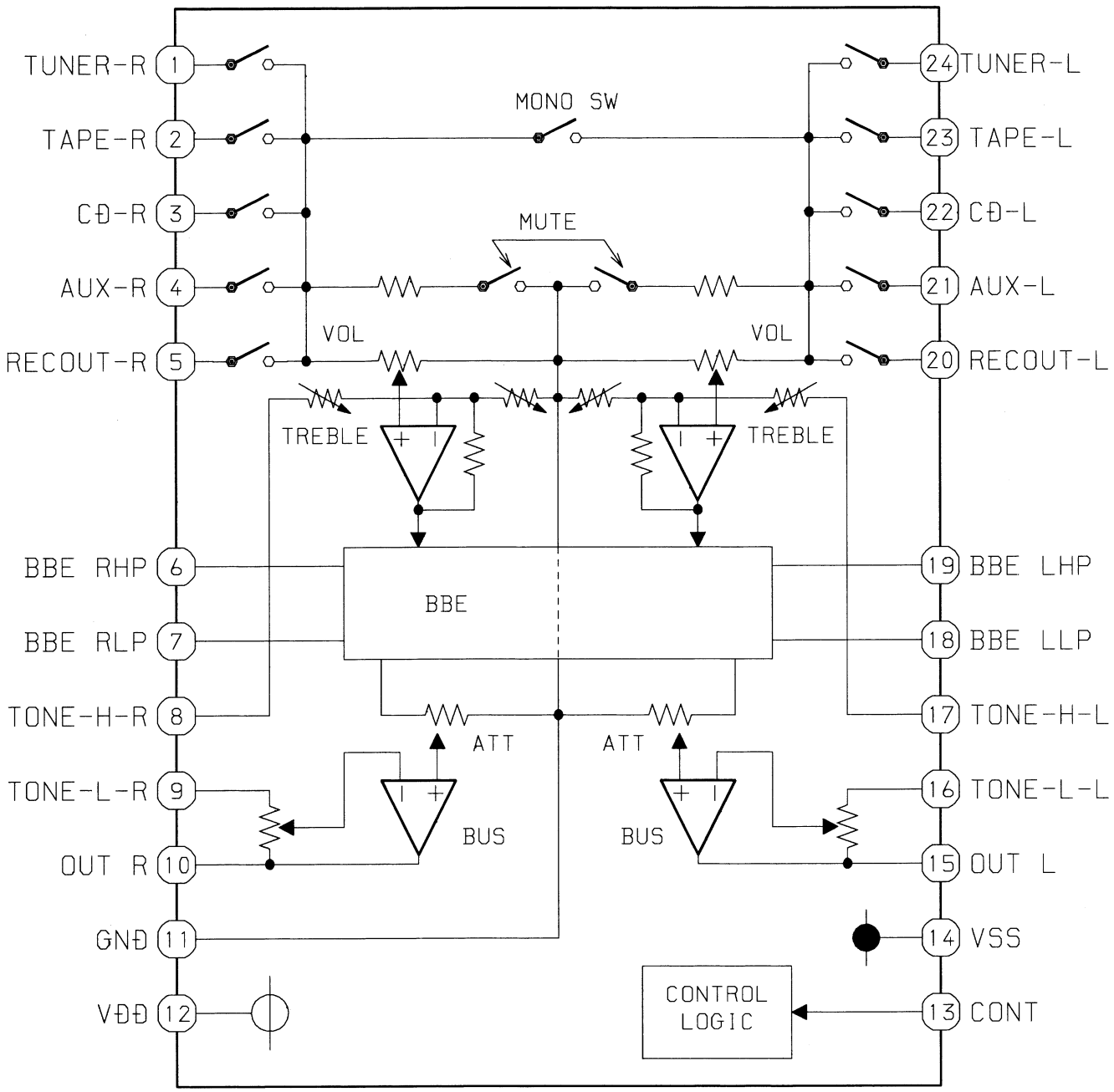
IC, LA1843



IC, LC72131D



IC, M61503FP


TUNER-R 1
TAPE-R 2
CD-R 3
AUX-R 4
RECOUT-R 5
BBE RHP 6
BBE RLP 7
TONE-H-R 8
TONE-L-R 9
OUT R 10
GND 11
VDD 12
24 TUNER-L
23 TAPE-L
22 CD-L
21 AUX-L
20 RECOUT-L
19 BBE LHP
18 BBE LLP
17 TONE-H-L
16 TONE-L-L
15 OUT L
14 VSS
13 CONT
MONO SW
MUTE
VOL
VOL
TREBLE
TREBLE
BBE
ATT
ATT
BUS
BUS
CONTROL LOGIC

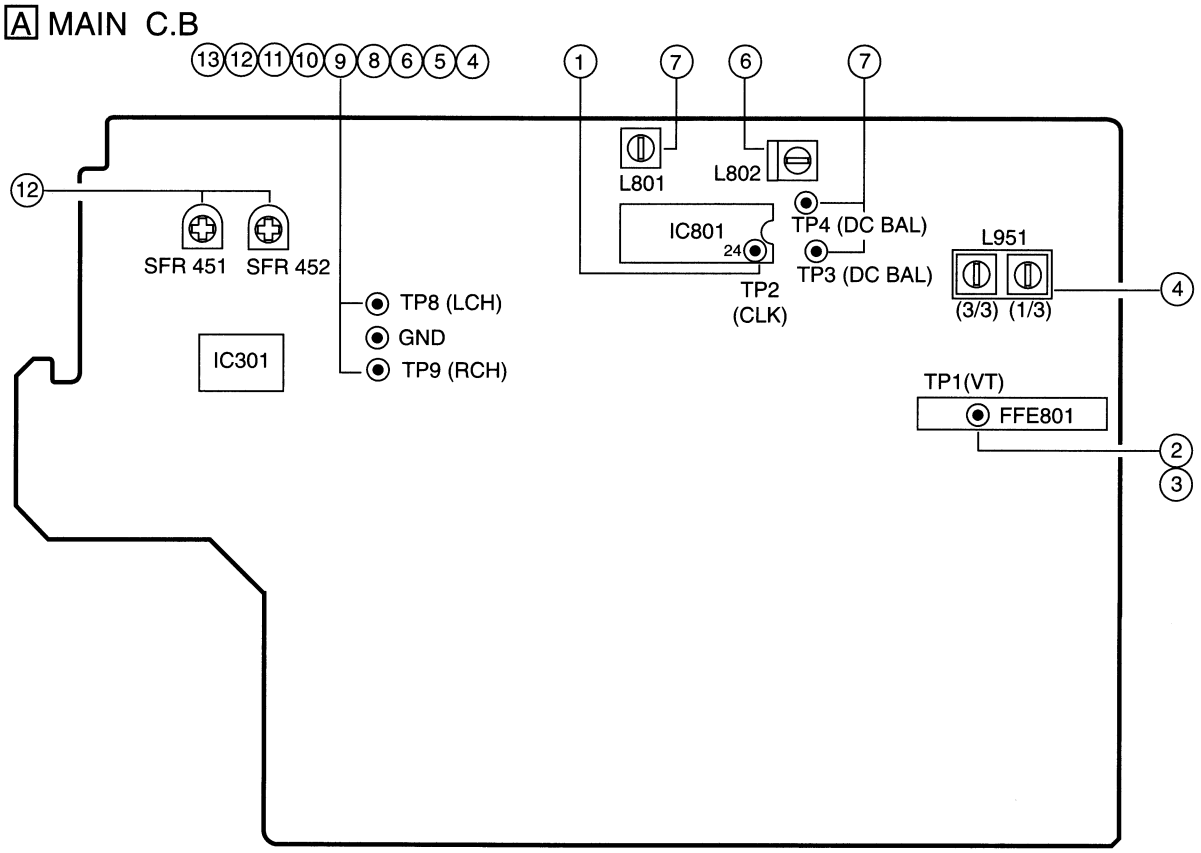
IC DESCRIPTION

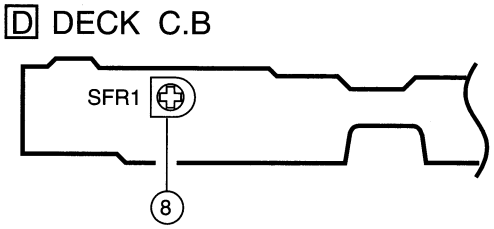
IC, μPD780226GF-012-3BA

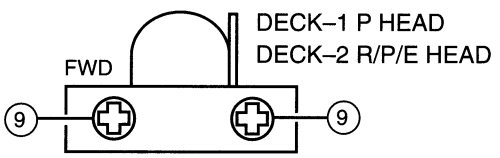
Pin No.	Pin Name	I/O	Description
1	O-$\overline{\text{MOTOR}}$	O	DECK MOTOR ON/OFF output.
2	O-$\overline{\text{SOL1}}$	O	DECK1 solenoid output.
3	O-$\overline{\text{SOL2}}$	O	DECK2 solenoid output.
4	NC	–	Not connected.
5	NC	–	Not connected.
6	O-$\overline{\text{SET\_LED}}$	O	SET LED ON/OFF output.
7	O-$\overline{\text{CLEAR\_LED}}$	O	CLEAR LED ON/OFF output.
8	O-$\overline{\text{PRESET\_LED}}$	O	PRESET LED ON/OFF output.
9	O-$\overline{\text{DOWN\_LED}}$	O	DOWN LED ON/OFF output.
10	O-$\overline{\text{UP\_LED}}$	O	UP LED ON/OFF output.
11	O-TUNER_ON	O	TUNER ON output.
12	O-MUTE	O	MUTE output.
13	O-PB2	O	DECK2/$\overline{\text{DECK1}}$ play output.
14	O-$\overline{\text{BIAS}}$	O	BIAS ON output.
15	O-RMT	O	REC mute output.
16	O-CD_ON	O	CD ON output.
17	IC	–	Internal connection (connected to GND).
18	VSSO	–	GND.
19	VDDO	–	Power supply.
20	O-POWER	O	System power supply $\overline{\text{ON}}$/OFF output.
21	O-OPEN	O	CD tray open data output.
22	O-CLOSE	O	CD tray close data output.
23	O-DISH_F	O	CD turntable forward rotation output.
24	O-DISH_R	O	CD turntable reverse rotation output.
25	NC	–	Not connected.
26	NC	–	Not connected.
27	I-$\overline{\text{REA}}$	I	Volume jog AD input.
28	I-RDS_CLK	I	Tuner RDS clock input (Not used).
29	I-SUBQ/I-RDS_DATA	I	CD SUBQ data input / Tuner RDS data input (Not used).
30	$\overline{\text{RESET}}$	–	System reset.
31	O-DATA	O	Data output for MAIN.
32	I-WRQ/$\overline{\text{STEREO}}$	I	CD WRQ input / Tuner stereo input.
33	I-DRF/IFC	I	CD DRF input / Tune IF count serial data input.
34	I-$\overline{\text{RMC}}$	I	System remote control input.
35	I-DISHSENS	I	CD turntable photo sensor input.
36	O-$\overline{\text{CLK\_SFT}}$	O	Micon clock shift output.
37	VDD1	–	Power supply.
38	X2	–	4.19MHz oscillator circuit.
39	X1	–	4.19MHz oscillator circuit.
40	VSS1	–	GND.
41	AVDD	–	Power supply.
42	I-HOLD	I	Power failure detected input.
43	I-CDSW	I	CD mecha switch input.

Pin No.	Pin Name	I/O	Description
44	I-SPEANA_L	I	A/D L-input for spectrum analyser level display.
45	I-SPEANA_R	I	A/D R-input for spectrum analyser level display.
46	I-KEY1	I	Key1 input.
47	I-KEY2	I	Key2 input.
48	I-KEY3	I	Key3 input.
49	I-TU_SIG	I	Tuner signal input (Not used).
50	AVSS	–	GND.
51	O-PLL_CLK	O	PLL clock enable output.
52	O-PLL_CE	O	Chip enable output for tuner PLL.
53	O-CD_LED	O	CD flash window LED ON/OFF output.
54	O-KSCAN	O	Key scan output.
55	O-CD_CLK	O	CD clock output.
56	O-CD_DATA	O	CD data output.
57	O-CD_CE	O	CD enable output.
58	NC	–	Not connected.
59	I-JOG_B	I	Dial jog rotary encoder input B.
60	I-JOG_A	I	Dial jog rotary encoder input A.
61	I-VOL_B	I	Volume rotary encoder input B.
62	I-VOL_A	I	Volume rotary encoder input A.
63	NC	–	Not connected.
64	I-TM_BASE	I	Base input for clock.
65	I-$\overline{\text{CAM2}}$	I	DECK2 CAM switch data input.
66	I-$\overline{\text{CAM1}}$	I	DECK1 CAM STOP switch data input.
67	P1/I-AUTO2	O/I	FL segment P1 output / DECK2 AUTO STOP switch data input.
68	P2/I-AUTO1	O/I	FL segment P2 output / DECK1 AUTO STOP switch data input.
69	P3/I-CST2	O/I	FL segment P3 output / DECK2 cassette detect switch data input.
70	P4/I-CST1	O/I	FL segment P4 output / DECK1 cassette detect switch data input.
71	P5/AM10K	O/I	FL segment P5 output / AM10K data input.
72 ~ 78	P6 ~ P12	O	FL segment P6 ~ P12 output.
79	VDD2	–	Power supply.
80	VLOAD	–	Power supply for FL display.
81	P13/C-JACK	O/I	FL segment P13 output / C-JACK data input.
82	P14/ECO-OFF	O/I	FL segment P14 output / ECO-OFF data input.
83 ~ 90	P15 ~ P22	O	FL segment P15 ~ P22 output.
91 ~100	G1 ~ G10	O	FL grid G1 ~ G10 output.

ADJUSTMENT <TUNER / DECK>







< TUNER SECTION >

1. Clock frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : Set to AM 1710kHz and check that the test point is 2160kHz ± 45Hz.

2. AM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to AM 1710kHz, 530kHz and check that the test point is less than 8.5V (1710kHz) and more than 0.6V (530kHz).

3. FM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 0.5V (87.5MHz) and less than 8.0V (108.0MHz).

4. AM Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L951(1/3) 1000kHz
   Method : Set to AM 1000kHz and adjust L951(1/3)to MAX.

5. FM Tracking Check
   Settings : • Test point : TP8(Lch), TP9(Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 9dBμV.

6. AM IF Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L802 ..... 450kHz

7. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC Balance)
   • Adjustment location : L801
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and adjust L801 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%.

< DECK SECTION >

8. Tape Speed Adjustment (DECK 2)
   Settings : • Test tape : TTA–100
   • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location : SFR1
   Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz and ±45Hz (REV) with respect to forward speed.

9. Head Azimuth Adjustment (DECK 1, DECK 2)
   Settings : • Test tape : TTA–330
   • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location : Head azimuth adjustment screw
   Method : Play back (FWD) the 8kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV PLAY mode.

10. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–330
    • Test point :TP8(Lch), TP9(Rch)
    Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5dB.

11. PB Sensitivity Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–200
    • Test point : TP8(Lch), TP9(Rch)
    Method : Play back the test tape and check that the output level of the test point is 110mV ± 3dB.

12. REC/PB Frequency Response Adjustment (DECK 2)
    Settings : • Test tape : TTA–602
    • Test point : TP8(Lch), TP9(Rch)
    • Input signal : 1kHz / 8kHz (LINE IN)
    • Adjustment location : SFR451 (Lch)
    SFR452 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes -20VU. Record and play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

13. REC/PB Sensitivity Check (DECK 2)
    Settings : • Test tape : TTA–602
    • Test point : TP8(Lch), TP9(Rch)
    • Input signal : 1kHz (LINE IN)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 0VU. Record and play back the 1kHz signals and check that the output is -1dB ± 3.5dB.

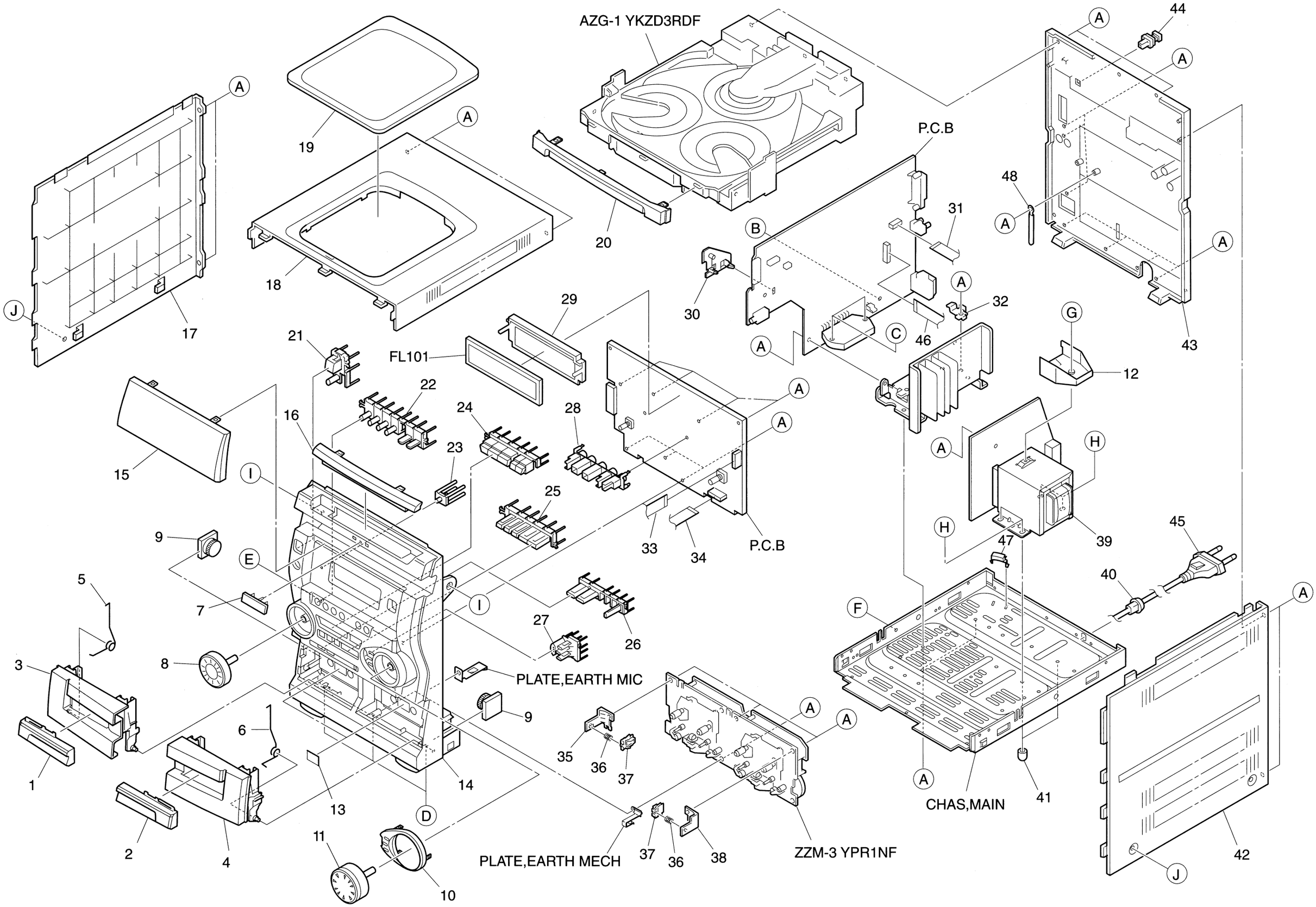
MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF9-006-010		WINDOW,CASS 1
2	8A-NF9-007-010		WINDOW,CASS 2
3	8A-NF9-003-010		BOX,CASS 1
4	8A-NF9-004-010		BOX,CASS 2
5	8A-NF8-207-010		SPR-T,EJECT 1
6	8A-NF8-208-010		SPR-T,EJECT 2
7	87-CE3-023-010		BADGE,AIWA 30N SILV
8	8A-NF9-018-010		KNOB,RTRY JOG
9	8A-NF8-209-010		OIL-DMPR,120
10	8A-NF9-017-010		PANEL,JOG
11	8A-NF9-016-010		KNOB,RTRY VOL
12	8A-NF9-208-010		HLDR,PWB PT
13	81-532-080-010		LABEL, CASS. COMPT
14	8A-NF9-001-010		CABI,FR U
15	8A-NF9-052-010		WINDOW,DISP LH<LH>
15	8A-NF9-005-010		WINDOW,DISP U<U>
16	8A-NF9-039-010		WINDOW,CD
17	8A-NF8-007-010		PANEL,LEFT V-2
18	8A-NF8-005-010		PANEL,TOP
19	8A-NF8-006-010		WINDOW,TOP
20	8A-NF9-014-010		PANEL,TRAY
21	8A-NF9-008-010		KEY,POWER
22	8A-NF9-009-010		KEY,FUN
23	8A-NF9-022-010		REFLECTOR,ECO
24	8A-NF9-010-010		KEY,ASSY OPE 1 WAY
25	8A-NF9-020-010		KEY,CD
26	8A-NF9-019-010		KEY,SYNC
27	8A-NF9-026-010		KEY,ENTER
28	8A-NF9-201-010		GUIDE,OPE 1 WAY
29	82-NF7-210-110		GUIDE,FL (*)
30	8A-NF8-206-010		HLDR,PWB M
31	88-906-251-110		FF-CABLE,6P 1.25
32	8A-NF8-205-010		HLDR,IC
33	88-913-301-110		FF-CABLE,13P-1.25
34	88-911-101-110		FF-CABLE,11P 1.25
35	87-NF4-216-010		HLDR,LOCK 1
36	86-NF9-224-010		SPR-C,LOCK
37	82-NF5-229-010		PLATE,LOCK
38	87-NF4-217-110		HLDR,LOCK 2
⚠ 39	8A-NF9-615-010		PT,ANF-9 LH<LH>
⚠ 39	8A-NF9-612-010		PT,ANF-9 U<U>
40	87-085-185-010		BUSHING, AC CORD (E)<LH>
40	87-A91-422-010		BUSHING,AC CORD(U)<U>
41	8Z-NB8-240-010		COVER, PL
42	8A-NF8-008-010		PANEL,RIGHT V-2
43	8A-NF9-028-010		CABI,REAR LHSM<LH>
43	8A-NF9-027-010		CABI,REAR USM<U>
44	84-ZG1-245-210		CAP,OPTICAL
⚠ 45	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI<LH>
⚠ 45	87-A80-110-010		AC CORD ASSY,U SPT-2W<U>
46	8A-NF9-609-010		F-CABLE,9P 2.5 480MM<U>
47	87-NF4-221-010		HLDR,CABLE
48	87-064-080-010		BINDER,WIRE
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
C	87-067-581-010		TAPPING SCREW, BVT2+3-15
D	87-067-689-010		TAPPING SCREW, BVTT+3-8
E	87-723-096-410		QT2+3-10W/O SLOT BL
F	87-721-096-410		QT2+3-10 GLD
G	87-067-584-010		TAPPING SCREW, BVT2+3-6
H	87-078-191-010		S-SCREW,IT+4-10
I	87-721-097-410		QT2+3-12 GLD
J	87-067-641-010		UTT2+3-8(W/O SLOT)BL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow				


AZG-1 YKZD3RDF
P.C.B
FL101
PLATE,EARTH MIC
PLATE,EARTH MECH
ZZM-3 YPR1NF
CHAS,MAIN
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C
D
E
F
G
H
I
J
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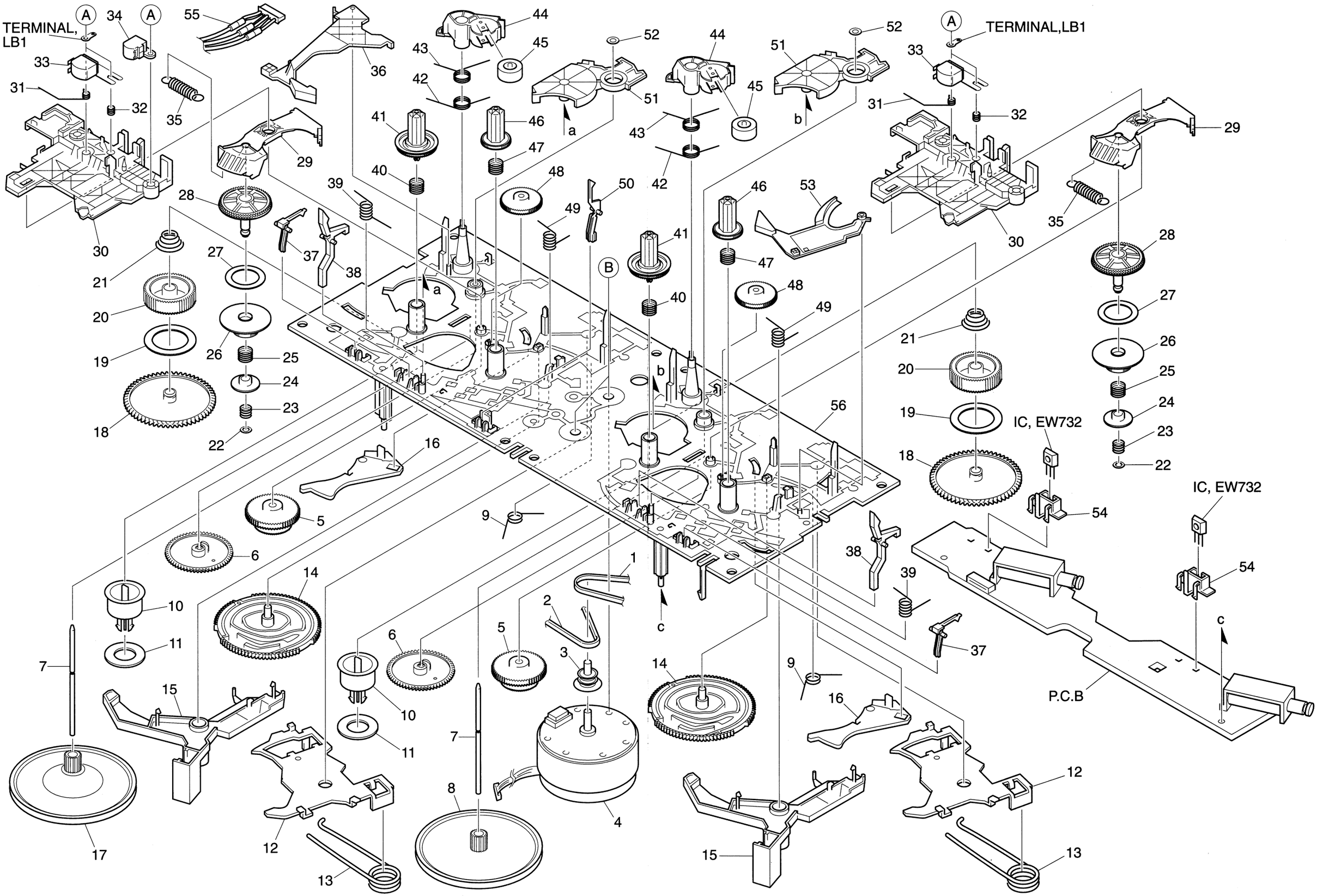
TAPE MECHANISM EXPLODED VIEW 1 / 1



TAPE MECHANISM PARTS LIST 1 / 1

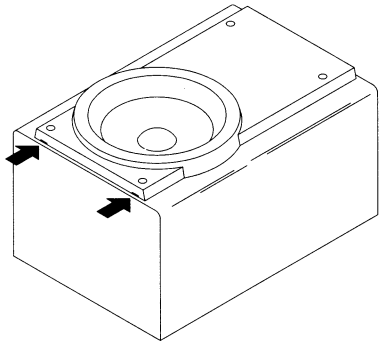
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM3-227-010		BELT,MAIN M3
2	8Z-ZM3-235-010		BELT,MAIN L
3	8Z-ZM1-235-010		PULLEY,MOT
4	87-045-347-010		MOT,SHU2L 70
5	8Z-ZM1-232-010		GEAR,IDL FF/REW
6	8Z-ZM3-244-010		GEAR,CAM TD20
7	8Z-ZM3-242-010		SHAFT,CAP M3
8	8Z-ZM3-228-010		FLY-WHL,M3
9	8Z-ZM3-231-010		SPR-T,TRIG
10	8Z-ZM3-213-010		CLR,MG
11	82-ZM3-616-010		RING MAGNET 4
12	8Z-ZM3-243-010		LEVER ASSY,HD UP
13	8Z-ZM3-238-010		SPR-T,HD UP
14	8Z-ZM3-219-010		GEAR,CAM M3
15	8Z-ZM3-206-010		LEVER,TRIG
16	8Z-ZM3-209-010		LEVER,CAM FR
17	8Z-ZM2-211-010		FLY-WHL,ZZM-2
18	8Z-ZM1-228-010		GEAR,SLIP T-UP B
19	8Z-ZM1-265-010		FELT,T-UP
20	8Z-ZM1-227-010		GEAR,SLIP T-UP A
21	8Z-ZM1-251-110		SPR-C,T-UP SLIP
22	8Z-ZM1-275-010		W-L,1,47-4-0.25
23	8Z-ZM1-257-010		SPR-C,F/R
24	8Z-ZM1-236-010		CLR,SLIP FF/REW
25	8Z-ZM3-226-010		SPR-C,FR M3
26	8Z-ZM3-250-010		GEAR,SLIP F/R A M3
27	8Z-ZM1-269-010		FELT,FF/REW 2
28	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2
29	8Z-ZM3-220-010		LEVER,FR M3
30	8Z-ZM3-205-010		LEVER,PLAY M3
31	8Z-ZM3-233-010		SPR-T,BRG M3
32	84-ZM2-227-310		SPR-C,AZIMUTH
33	87-A90-403-110		HEAD,RPH MS15R
34	87-A90-404-010		HEAD,EH LE15B
35	8Z-ZM3-239-010		SPR-E,FR
36	8Z-ZM3-211-010		LEVER,EJECT R
37	8Z-ZM3-225-010		LEVER,STOP
38	8Z-ZM3-221-010		LEVER,CAS
39	8Z-ZM3-234-010		SPR-T,LVR CAS
40	8Z-ZM3-223-010		SPR-C,REEL R M3
41	8Z-ZM1-225-110		GEAR,REEL R
42	8Z-ZM3-240-010		SPR-T,T-UP M3
43	8Z-ZM3-237-010		SPR-T,PINCH M3
44	8Z-ZM3-215-010		LEVER,PINCH M3
45	8Z-ZM1-261-110		ROLLER ASSY,PINCH
46	8Z-ZM1-226-010		GEAR,REEL L
47	8Z-ZM3-222-010		SPR-C,REEL L M3
48	8Z-ZM3-251-010		GEAR,IDL REW M3
49	8Z-ZM3-236-010		SPR-T,PLAY M3
50	82-ZM1-240-110		LVR,REC(*)
51	8Z-ZM3-216-010		LEVER,T-UP M3
52	87-B10-301-010		W-L,1.63-3.2-05 SLIT
53	8Z-ZM3-212-010		LEVER,EJECT L
54	8Z-ZM3-214-010		HLDR,IC
55	86-ZM3-605-110		CONN ASSY,8P -RPB
56	8Z-ZM3-203-010		CHAS ASSY,M3
A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
B	8Z-ZM2-220-110		V+2.6 ZZM-2

SPEAKER DISASSEMBLY INSTRUCTIONS

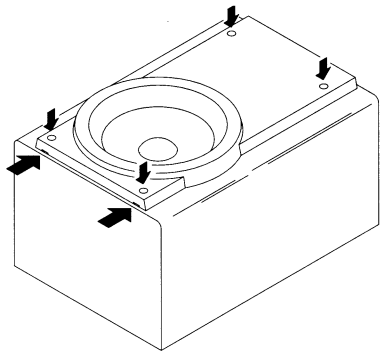
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



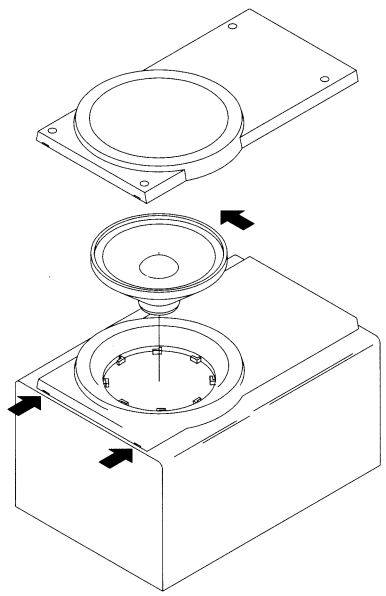
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

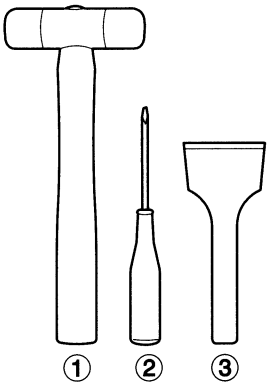


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

① Plastic head hammer
② (⊖) flat head screwdriver
③ Cut chisel

How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

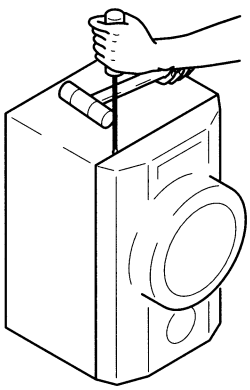


Fig-1

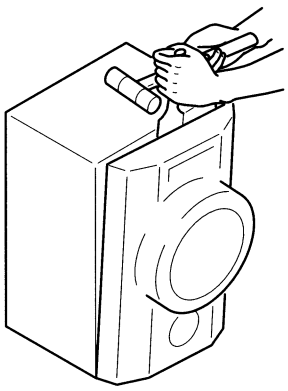


Fig-2

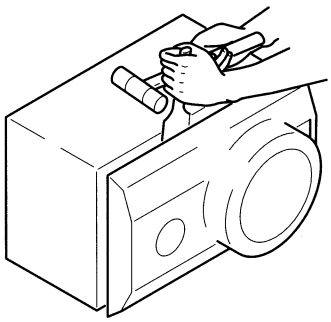


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM3-227-010		BELT,MAIN M3
2	8Z-ZM3-235-010		BELT,MAIN L
3	8Z-ZM1-235-010		PULLEY,MOT
4	87-045-347-010		MOT,SHU2L 70
5	8Z-ZM1-232-010		GEAR,IDL FF/REW
6	8Z-ZM3-244-010		GEAR,CAM TD20
7	8Z-ZM3-242-010		SHAFT,CAP M3
8	8Z-ZM3-228-010		FLY-WHL,M3
9	8Z-ZM3-231-010		SPR-T,TRIG
10	8Z-ZM3-213-010		CLR,MG
11	82-ZM3-616-010		RING MAGNET 4
12	8Z-ZM3-243-010		LEVER ASSY,HD UP
13	8Z-ZM3-238-010		SPR-T,HD UP
14	8Z-ZM3-219-010		GEAR,CAM M3
15	8Z-ZM3-206-010		LEVER,TRIG
16	8Z-ZM3-209-010		LEVER,CAM FR
17	8Z-ZM2-211-010		FLY-WHL,ZZM-2
18	8Z-ZM1-228-010		GEAR,SLIP T-UP B
19	8Z-ZM1-265-010		FELT,T-UP
20	8Z-ZM1-227-010		GEAR,SLIP T-UP A
21	8Z-ZM1-251-110		SPR-C,T-UP SLIP
22	8Z-ZM1-275-010		W-L,1,47-4-0.25
23	8Z-ZM1-257-010		SPR-C,F/R
24	8Z-ZM1-236-010		CLR,SLIP FF/REW
25	8Z-ZM3-226-010		SPR-C,FR M3
26	8Z-ZM3-250-010		GEAR,SLIP F/R A M3
27	8Z-ZM1-269-010		FELT,FF/REW 2
28	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2
29	8Z-ZM3-220-010		LEVER,FR M3
30	8Z-ZM3-205-010		LEVER,PLAY M3
31	8Z-ZM3-233-010		SPR-T,BRG M3
32	84-ZM2-227-310		SPR-C,AZIMUTH
33	87-A90-403-110		HEAD,RPH MS15R
34	87-A90-404-010		HEAD,EH LE15B
35	8Z-ZM3-239-010		SPR-E,FR
36	8Z-ZM3-211-010		LEVER,EJECT R
37	8Z-ZM3-225-010		LEVER,STOP
38	8Z-ZM3-221-010		LEVER,CAS
39	8Z-ZM3-234-010		SPR-T,LVR CAS
40	8Z-ZM3-223-010		SPR-C,REEL R M3
41	8Z-ZM1-225-110		GEAR,REEL R
42	8Z-ZM3-240-010		SPR-T,T-UP M3
43	8Z-ZM3-237-010		SPR-T,PINCH M3
44	8Z-ZM3-215-010		LEVER,PINCH M3
45	8Z-ZM1-261-110		ROLLER ASSY,PINCH
46	8Z-ZM1-226-010		GEAR,REEL L
47	8Z-ZM3-222-010		SPR-C,REEL L M3
48	8Z-ZM3-251-010		GEAR,IDL REW M3
49	8Z-ZM3-236-010		SPR-T,PLAY M3
50	82-ZM1-240-110		LVR,REC(*)
51	8Z-ZM3-216-010		LEVER,T-UP M3
52	87-B10-301-010		W-L,1.63-3.2-05 SLIT
53	8Z-ZM3-212-010		LEVER,EJECT L
54	8Z-ZM3-214-010		HLDR,IC
55	86-ZM3-605-110		CONN ASSY,8P -RPB
56	8Z-ZM3-203-010		CHAS ASSY,M3
A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
B	8Z-ZM2-220-110		V+2.6 ZZM-2

SPEAKER PARTS LIST
SX-NAJ22 (YUSL), SX-NSZ22 (YLSL)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NSK-001-010		PANEL,FR
2	8A-NSK-003-010		GRILLE,FRAME ASSY
3	8A-NSK-006-010		PLATE,NAME
4	8A-NSK-007-010		PROTECTOR,TWA
5	8A-NSK-602-010		SPKR,W 140
6	88-NS5-605-010		SPKR,T 60
7	87-NSH-612-010		SPKR,CERAMIC ASSY
8	87-NS7-611-010		CORD,SPKR

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111

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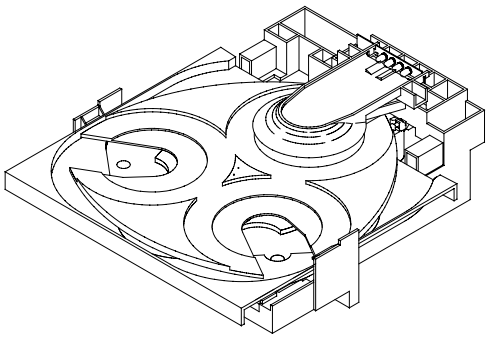
aiwa SERVICE

AZG-1

English



SERVICE MANUAL

CD MECHANISM

BASIC CD MECHANISM : KSM-880CAB

TYPE
Z8RMDJM

aiwa

S/M Code No. 09-001-335-3N2

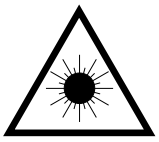
DATA

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

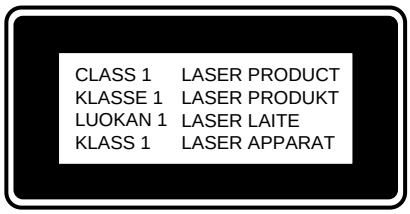
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

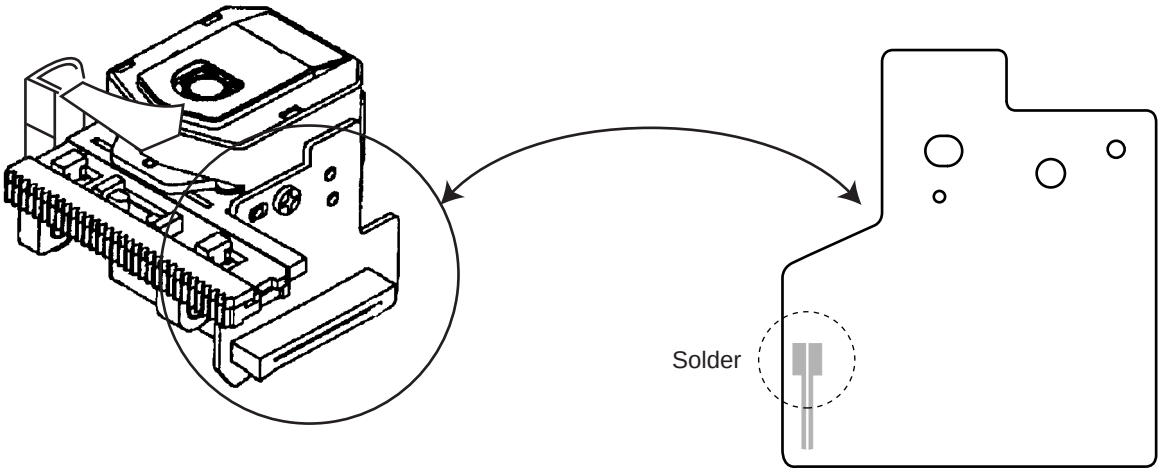
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

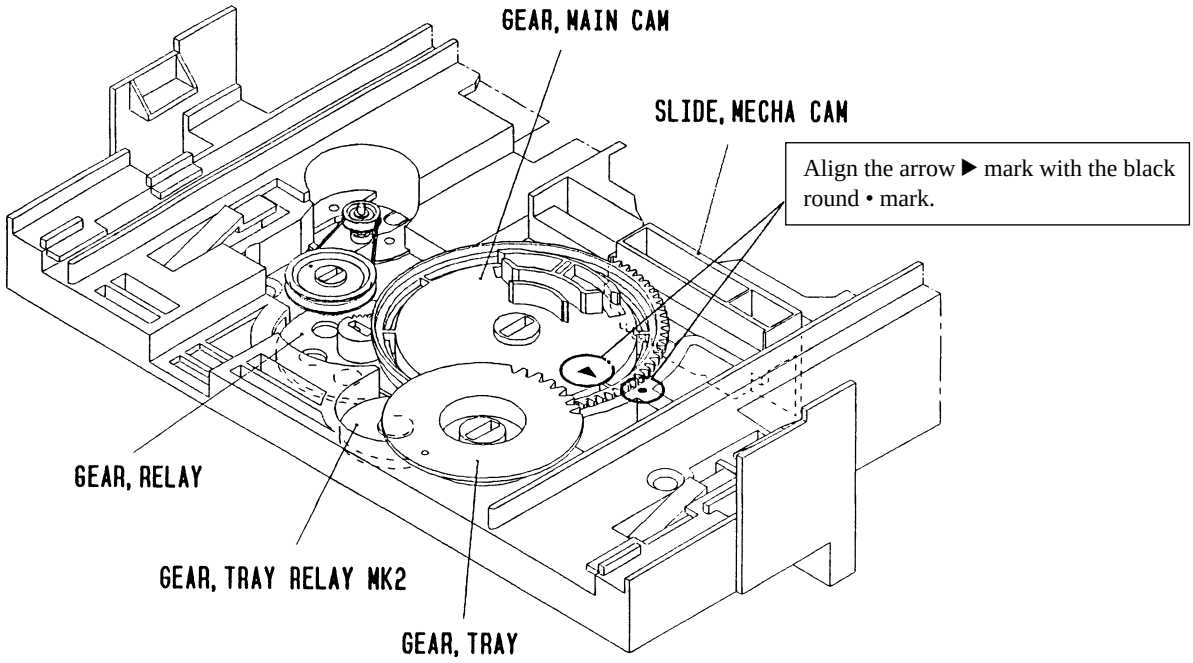
1) After the connection, remove solder shown in the figure below.



How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

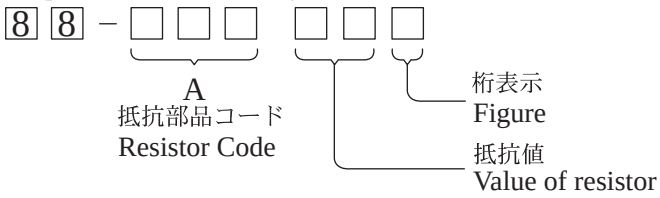
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-446-010		C-IC,LA9241ML
	87-A21-319-010		C-IC,LC78622NE
	87-A20-445-010		IC,BA5936
TRANSISTOR			
	87-026-609-080		TR,KTA1266GR
	87-026-295-080		TR,DTC144TK
	87-A30-087-080		C-FET,2SK2158
	87-026-237-080		CHIP-TR,DTC124XK
	87-A30-076-080		C-TR,2SC3052F
	87-A30-075-080		C-TR,2SA1235F
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
	87-020-331-080		CHIP-DIODE,DAN202K
	87-A40-337-080		ZENER,MTZJ 6.8B
	87-A40-313-080		C-DIODE,MC 2840
	87-A40-620-080		ZENER,MTZJ6.2A
3CD C.B			
C11	87-012-393-080		C-CAP,S 0.22-16 R K
C12	87-012-157-080		C-CAP,S 330P-50 CH
C13	87-016-369-080		C-CAP,S 0.033-25 B K
C14	87-A10-201-080		C-CAP,S0.33-16 KB
C15	87-010-213-080		C-CAP,S 0.015-50 B
C16	87-016-083-080		C-CAP,S 0.15-16 RK
C17	87-010-184-080		CHIP CAPACITOR 3300P(K)
C18	87-A11-177-080		C-CAP,S 0.15-16 K B
C19	87-010-992-080		C-CAP,S 0.047-25 B
C20	87-010-178-080		CHIP CAP 1000P
C21	87-012-393-080		C-CAP,S 0.22-16 R K
C22	87-016-083-080		C-CAP,S 0.15-16 RK
C23	87-010-197-080		CAP, CHIP 0.01 DM
C24	87-010-186-080		CAP,CHIP 4700P
C25	87-010-400-040		CAP,E 0.47-50
C26	87-010-322-080		C-CAP,S 100P-50 CH
C27	87-010-382-040		CAP,E 22-25 SME
C28	87-010-545-040		CAP,E 0.22-50 SME
C29	87-010-184-080		CHIP CAPACITOR 3300P(K)
C31	87-010-186-080		CAP,CHIP 4700P
C32	87-010-315-080		C-CAP,S 27P-50 CH
C33	87-016-081-080		C-CAP,S 0.1-16 RK
C35	87-010-196-080		CHIP CAPACITOR,0.1-25
C37	87-010-405-080		CAP, ELECT 10-50V
C38	87-010-263-080		CAP, ELECT 100-10V
C39	87-010-197-080		CAP, CHIP 0.01 DM
C40	87-010-401-080		CAP, ELECT 1-50V
C41	87-016-081-080		C-CAP,S 0.1-16 RK
C42	87-010-263-080		CAP, ELECT 100-10V
C43	87-010-197-080		CAP, CHIP 0.01 DM
C44	87-010-263-080		CAP, ELECT 100-10V
C46	87-010-196-080		CHIP CAPACITOR,0.1-25
C47	87-010-260-080		CAP, ELECT 47-25V
C48	87-010-196-080		CHIP CAPACITOR,0.1-25
C49	87-010-404-080		CAP, ELECT 4.7-50V
C50	87-010-197-080		CAP, CHIP 0.01 DM
C51	87-010-263-040		CAP,E 100-10
C52	87-012-156-080		C-CAP,S 220P-50 CH
C71	87-012-393-080		C-CAP,S 0.22-16 R K
C101	87-016-369-080		C-CAP,S 0.033-25 B K
C102	87-016-081-080		C-CAP,S 0.1-16 RK
C103	87-010-318-080		C-CAP,S 47P-50 CH
C104	87-012-154-080		C-CAP,S 150P-50 CH
C105	87-010-196-080		CHIP CAPACITOR,0.1-25
C109	87-010-197-080		CAP, CHIP 0.01 DM
C111	87-010-312-080		C-CAP,S 15P-50 CH
C112	87-010-154-080		CAP CHIP 10P
C113	87-010-178-080		CHIP CAP 1000P
C115	87-010-404-080		CAP, ELECT 4.7-50V
C116	87-010-196-080		CHIP CAPACITOR,0.1-25
C117	87-010-263-040		CAP,E 100-10
C118	87-010-178-080		CHIP CAP 1000P
C121	87-010-403-080		CAP, ELECT 3.3-50V
C122	87-010-403-080		CAP, ELECT 3.3-50V
C123	87-010-180-080		C-CER 1500P
C124	87-010-180-080		C-CER 1500P
C132	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-314-080		C-CAP,S 22P-50V
C191	87-010-263-040		CAP,E 100-10
C192	87-010-178-080		CHIP CAP 1000P
C193	87-010-196-080		CHIP CAPACITOR,0.1-25
C201	87-010-196-080		CHIP CAPACITOR,0.1-25
C204	87-010-196-080		CHIP CAPACITOR,0.1-25
C205	87-010-196-080		CHIP CAPACITOR,0.1-25
C206	87-010-196-080		CHIP CAPACITOR,0.1-25
C207	87-010-196-080		CHIP CAPACITOR,0.1-25
C208	87-010-196-080		CHIP CAPACITOR,0.1-25
C211	87-010-405-040		CAP,E 10-50
C212	87-010-405-040		CAP,E 10-50
C213	87-010-196-080		CHIP CAPACITOR,0.1-25
C251	87-010-322-080		C-CAP,S 100P-50 CH
C252	87-010-322-080		C-CAP,S 100P-50 CH
C253	87-010-322-080		C-CAP,S 100P-50 CH
C281	87-010-382-040		CAP,E 22-25 SME
C401	87-A10-730-080		CAP,E 1000-16 SMG
C402	87-010-197-080		CAP, CHIP 0.01 DM
C403	87-010-196-080		CHIP CAPACITOR,0.1-25
C404	87-010-260-040		CAP,E 47-25 SME
C405	87-010-382-080		CAP, ELECT 22-25V
C421	87-010-382-080		CAP, ELECT 22-25V
C422	87-010-196-080		CHIP CAPACITOR,0.1-25
C901	87-010-260-080		CAP, ELECT 47-25V
C902	87-010-196-080		CHIP CAPACITOR,0.1-25
CN1	87-A60-429-010		CONN,16P H TOC-A
CN2	87-099-199-010		CONN,6P 6216 H
CN201	87-099-030-010		CONN,13P 6216H
CN203	87-099-212-010		CONN,5P 6216 V
CN204	84-ZG1-648-010		CONN ASSY,6P
CN501	87-A60-666-010		CONN,2P H 2MM JMT
FB501	87-A50-189-080		C-COIL,S BLM21B272S
L11	87-005-849-080		COIL,10UH(CECS)
L101	87-005-614-080		COIL 100UH LAV35 J
L102	87-005-602-080		COIL,10UH LAV35 J
LED901	87-A40-558-010		LED,SLZ-8128A-01-A
M201	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
SFR101	87-A90-787-080		SFR,100K H HOKU
SW201	87-036-109-010		SW,MICRO SPPB61
SW202	87-036-109-010		SW,MICRO SPPB61
X101	87-A70-046-010		VIB,XTAL 16.934MHZ
LED C.B			
LED301	87-A40-263-080		LED,SLH-56PCT31 GRN
LED302	87-A40-268-080		LED,SLH-56DCT31 ORN
LED303	87-A40-268-080		LED,SLH-56DCT31 ORN
LED304	87-A40-263-080		LED,SLH-56PCT31 GRN
T-T C.B			
C401	87-018-214-080		CAP TC U 0.1-50F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
M401	87-045-364-010		MOTOR(BCH3B14)
PS401	87-026-573-010		SNSR,PHOTO GP1S53V

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
MOTOR C.B							
PIN3	91-564-722-110		CONN,PIN 6P				
SW1	91-572-085-110		LEAF SWITCH				

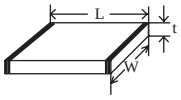
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

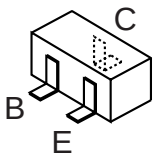
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

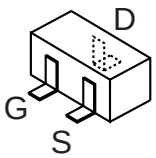
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



2SA1235F
2SC3052F
DTC124XK
DTC144TK

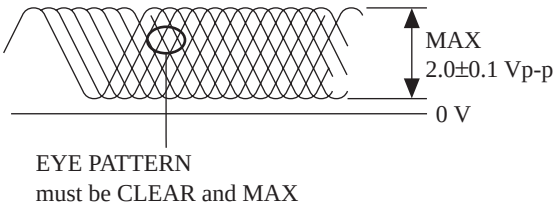
KTA1266GR



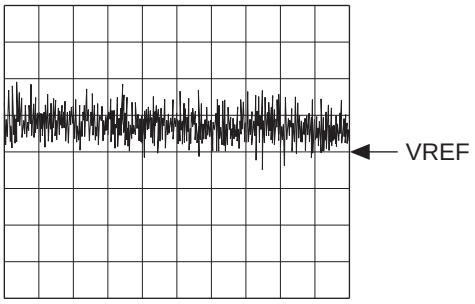
2SK2158

WAVE FORM

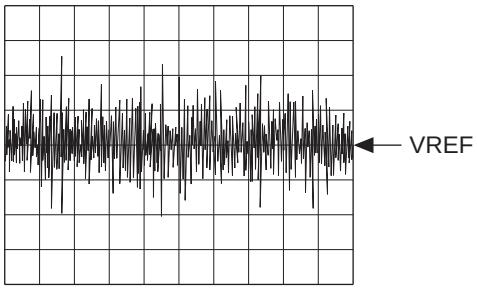
① IC11 Pin ㊶ (RFSH) VOLT/DIV: 0.5V
TIME/DIV: 1µS



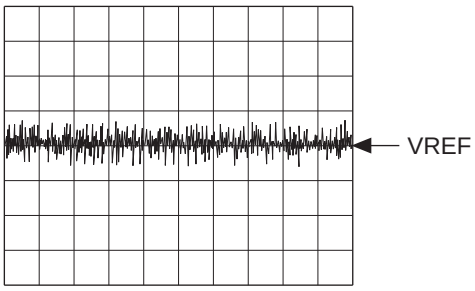
② IC11 Pin ⑯ (FD) VOLT/DIV: 100mV
TIME/DIV: 1mS



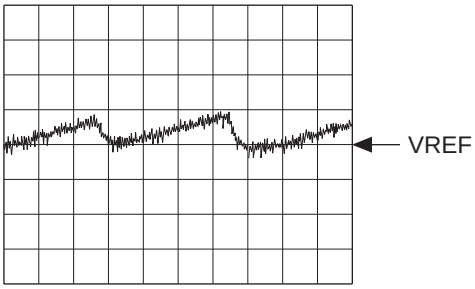
③ IC11 Pin ⑮ (TO) VOLT/DIV: 100mV
TIME/DIV: 1mS



④ IC11 Pin ㉗ (SPD) VOLT/DIV: 100mV
TIME/DIV: 1mS

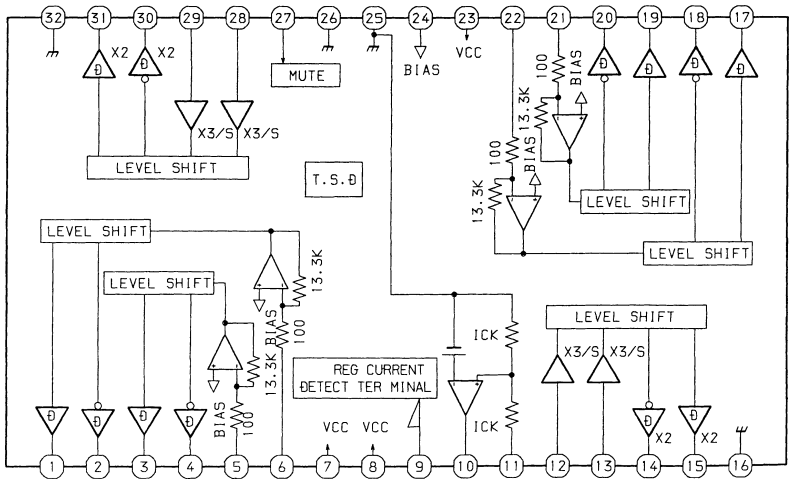


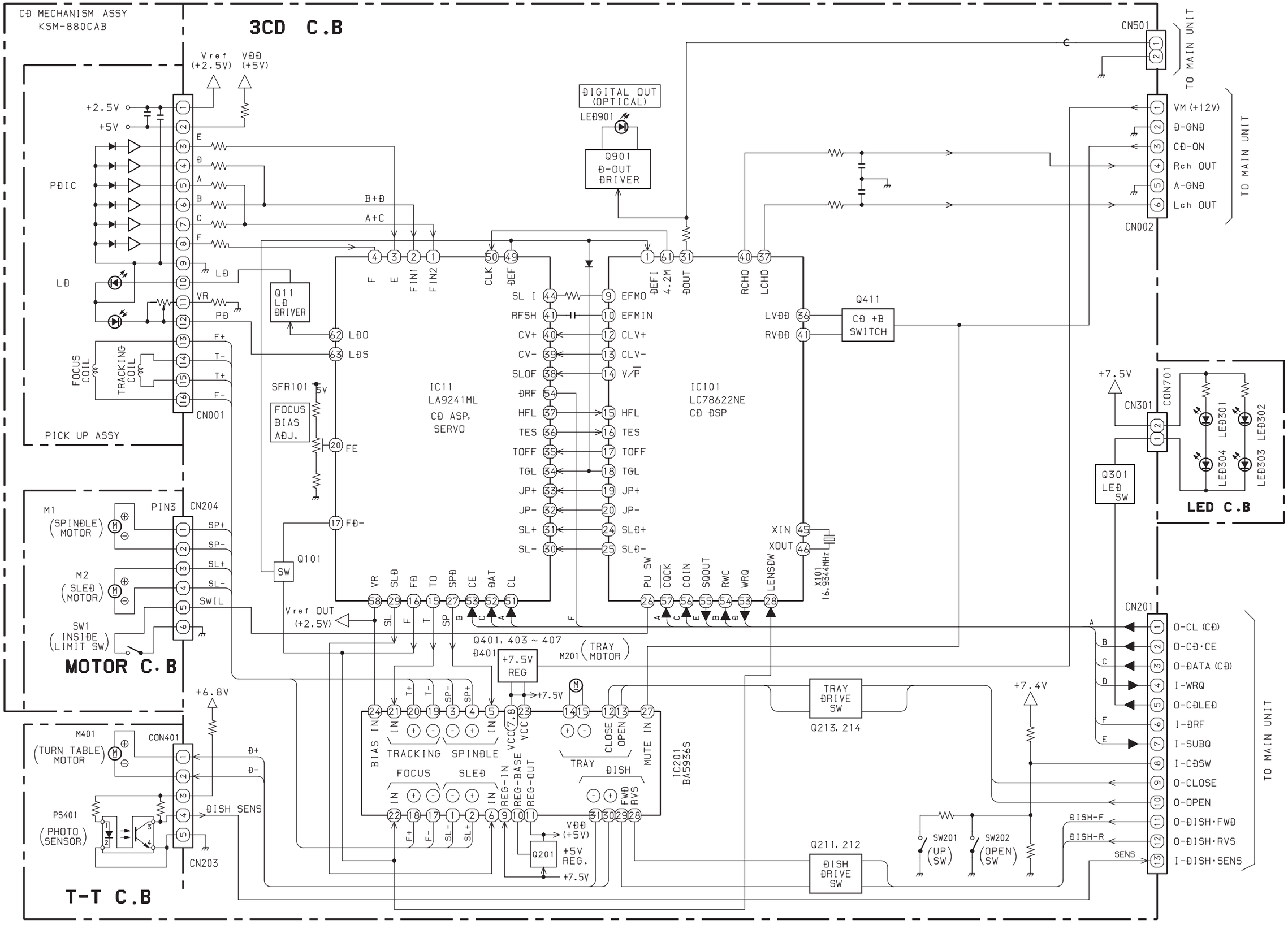
⑤ IC11 Pin ㉙ (SLD) VOLT/DIV: 200mV
TIME/DIV: 2S

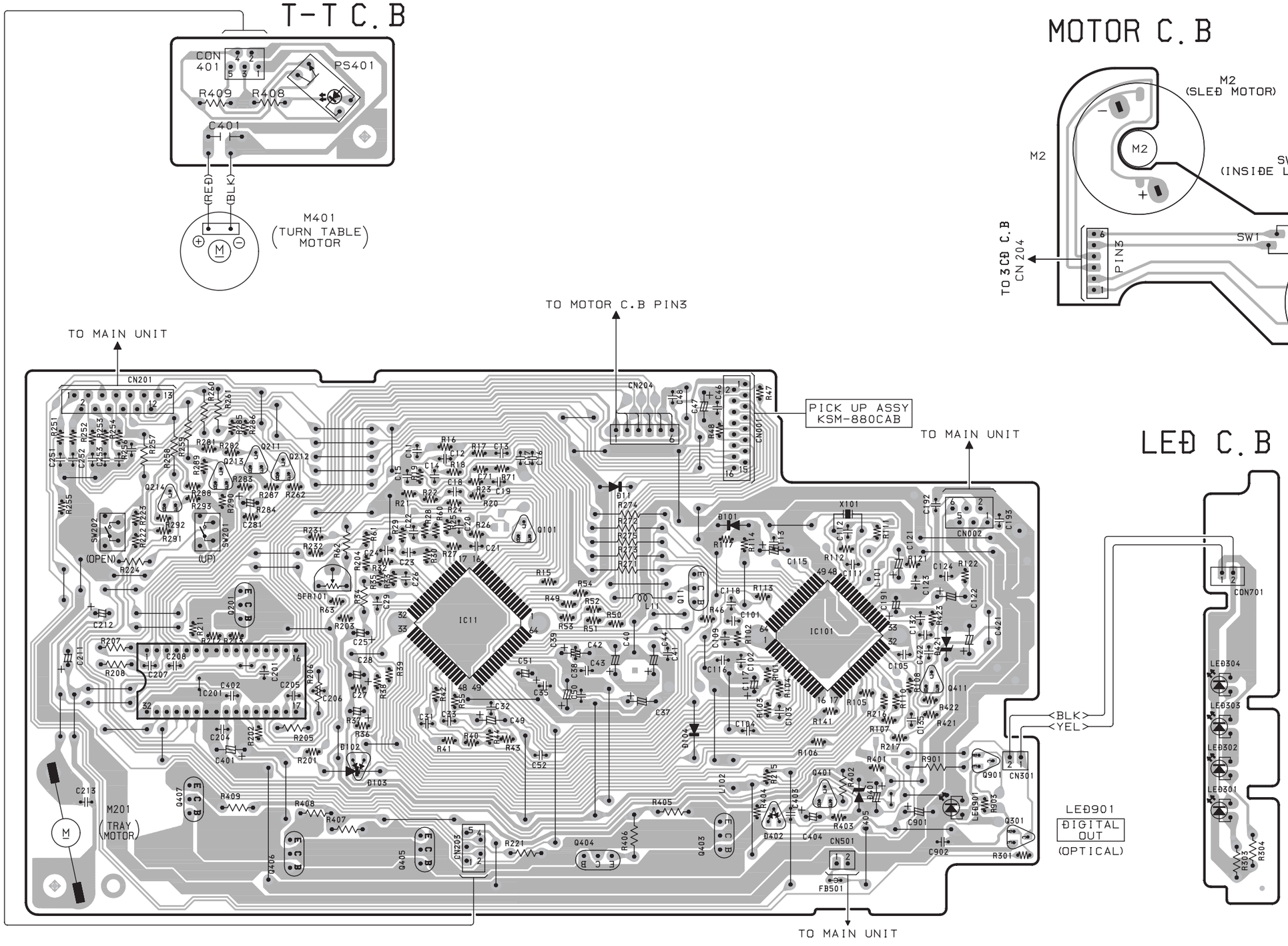


IC BLOCK DIAGRAM

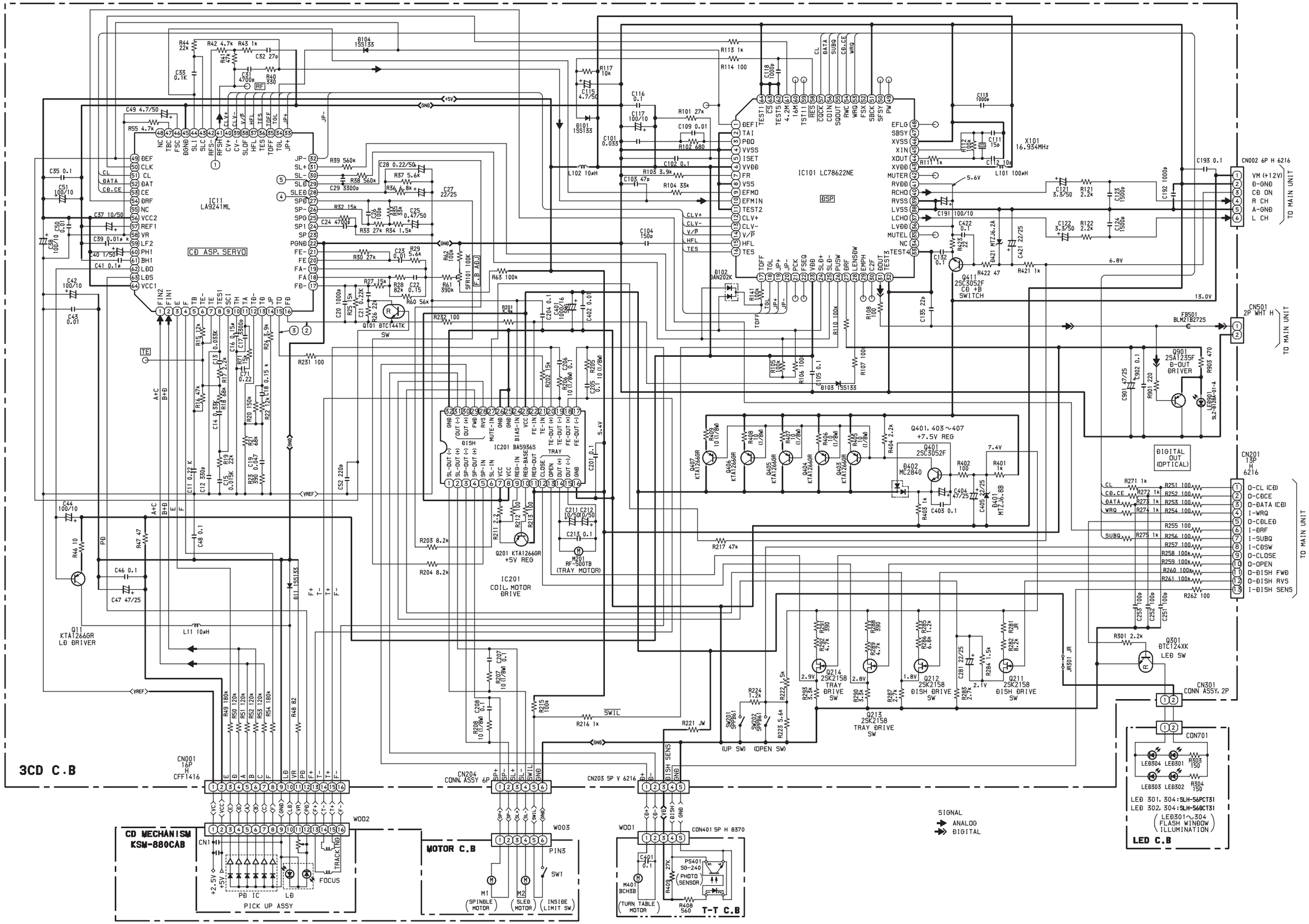
IC, BA5936S




CD MECHANISM ASSY
KSM-880CAB
3CD C.B
PICK UP ASSY
PDIC
LD
FOCUS COIL
TRACKING COIL
CN001
Vref (+2.5V)
VDD (+5V)
+2.5V
+5V
E
D
A
B
C
F
LD
VR
PD
F+
T-
T+
F-
B+D
A+C
Q11 LD DRIVER
SFR101
5V
FOCUS BIAS ADJ.
FE
FD-
Q101
SW
Vref OUT (+2.5V)
IC11
LA9241ML
CD ASP, SERVO
IC101
LC78622NE
CD DSP
DIGITAL OUT (OPTICAL)
LED901
Q901 D-OUT DRIVER
CN501
TO MAIN UNIT
VM (+12V)
D-GND
CD-ON
Rch OUT
A-GND
Lch OUT
CN002
Q411
CD +B SWITCH
+7.5V
CN301
CON701
Q301 LED SW
LED304 LED301 LED303 LED302
LED C.B
M1 (SPINDLE MOTOR)
M2 (SLED MOTOR)
SW1 (INSIDE LIMIT SW)
PIN3
CN204
SP+
SP-
SL+
SL-
SWIL
MOTOR C.B
Q401, 403 ~ 407
D401
+7.5V REG
M201 (TRAY MOTOR)
TRAY DRIVE SW
Q213, 214
+6.8V
+7.4V
M401 (TURN TABLE MOTOR)
CON401
D+
D-
PS401 (PHOTO SENSOR)
DISH SENS
CN203
T-T C.B
TRACKING
SPINDLE
FOCUS
SLED
TRAY
DISH
IC201
BA5936S
VDD (+5V)
Q201
+5V REG.
+7.5V
Q211, 212
DISH DRIVE SW
SW201 (UP SW)
SW202 (OPEN SW)
CN201
O-CL (CD)
O-CD·CE
O-DATA (CD)
I-WRQ
O-CDLED
I-DRF
I-SUBQ
I-CDSW
O-CLOSE
O-OPEN
O-DISH·FWD
O-DISH·RVS
I-DISH·SENS
DISH-F
DISH-R
SENS
X101
16.9344MHz


T-T C.B
CON 401
PS401
R409
R408
C401
(RED)
(BLK)
M401
(TURN TABLE) MOTOR
MOTOR C.B
M2
(SLED MOTOR)
M2
SW1
(INSIDE LIMIT SW)
M1
(SPINDLE MOTOR)
SW1
PIN3
TO 3CD C.B CN 204
M1
TO MOTOR C.B PIN3
TO MAIN UNIT
CN201
CN204
PICK UP ASSY KSM-880CAB
TO MAIN UNIT
LED C.B
IC11
IC101
X101
CN002
CON701
LED304
LED303
LED302
LED301
SW202
(OPEN)
SW201
(UP)
SFR101
M201
(TRAY MOTOR)
CN205
CN501
FB501
CN001
CN301
Q901
LED901
R903
Q301
R301
LED901
DIGITAL OUT
(OPTICAL)
BLK
YEL
TO MAIN UNIT

3CD C.B


IC11 LA9241ML
CD ASP. SERVO
IC101 LC78622NE
DSP
IC201 BA5936S
TRAY
DISH
IC201 COIL MOTOR DRIVE
X101 16.934MHz
3CD C.B
CD MECHANISM KSM-880CAB
PICK UP ASSY
MOTOR C.B
T-T C.B
LED C.B
CN002 6P H 6216
TO MAIN UNIT
CN501 2P WHT H
CN201 13P H 6216
CN301 CONN ASSY. 2P
CN001 16P H CFF1416
CN204 CONN ASSY 6P
CN203 5P V 6216
CN401 5P H 8370
CON701
Q401, 403~407 +7.5V REG
Q201 KTA1266GR +5V REG
Q11 KTA1266GR LD DRIVER
Q214 2SK2158 TRAY DRIVE SW
Q213 2SK2158 TRAY DRIVE SW
Q212 2SK2158 DISH DRIVE SW
Q211 2SK2158 DISH DRIVE SW
Q411 2SC3052F CD +B SWITCH
Q901 2SA1235F D-OUT DRIVER
Q301 DTC124XK LED SW
Q402 MC2840
Q401 2SC3052F
M201 RF-500TB (TRAY MOTOR)
M401 BCH5B (TURN TABLE MOTOR)
M1 (SPINDLE MOTOR)
M2 (SLED MOTOR)
SW1 (INSIDE LIMIT SW)
PS401 SG-240 (PHOTO SENSOR)
PD IC
LD
FOCUS
TRACKING
SW
(UP SW)
(OPEN SW)
DIGITAL OUT (OPTICAL)
SIGNAL
ANALOG
DIGITAL
LED 301, 304: SLH-56PCT31
LED 302, 304: SLH-56BCT31
(LED301~304 FLASH WINDOW ILLUMINATION)
VM (+12V)
D-GND
CD ON
R CH
A-GND
L CH
5.6V
6.8V
13.0V
7.4V
2.9V
2.8V
1.8V
2.1V
+5V
GND
VREF

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the function CD button.
   All FL display tubes will light up, and the test mode will be activated.

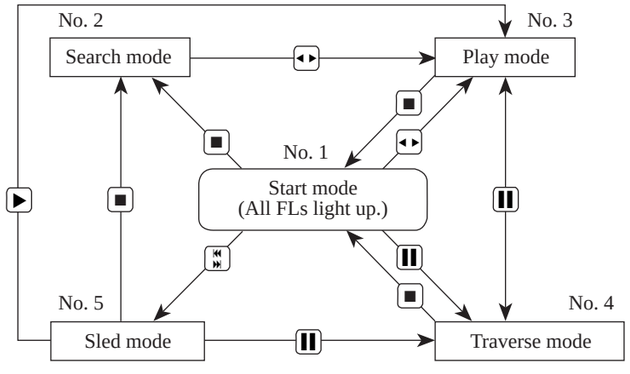
2. How to Cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   - Press the function button. (except CD function button)
   - Press the power switch button.
   - Disconnect the AC plug

3. CD Test Mode Functions
   When test mode is activated, the following mode functions from No.1 to No.5 can be used by pressing the operation keys.

Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	All lamps light	• Test mode is activated. • CD block power is ON.	• FL display check (All displays light.)
Search mode No.2	■ key		• Laser diode turns always ON. • Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	• APC circuit check • Laser current measurement (Laser current control. Across a resistor connected between emitter and GND.) FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀ ▶ key		• Normal playback • Focus search is continued if TOC cannot be read. * NOTE 1	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check DRF
Traverse mode No.4	▌▌ key		• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON/OFF Tracking balance (traverse) check
Sled mode No.5	⏮ key ⏭	All lamps light	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the ▌▌ status is active. If they are pressed, playback will not be possible after the ▌▌ status has been canceled. If the ⏮ or ⏭ keys are pressed in the ▌▌ status, press the ■ key and return to the start mode (No.1).
* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

IC DESCRIPTION

IC, LC78622NE

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISET	I		Pin to which external resistor adjusting the PD0 output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	TEST2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLV–	O	Disc motor control output. Three level output is possible using command.	
14	V/$\overline{P}$	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP–	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and thesync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24	SLD+	I/O	General purpose input/output pin 1 to 5.	The pin is controlled by the serial data command from microprocessor. When the pin is not used, set the pin to the input terminal and connect to 0V, or alternately set the pin to output terminal and leave the pin open.
25	SLD-	I/O		
26	PUSW	I/O		
27	DRF	I/O		
28	LENSDW	I/O		
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	TEST3, TEST4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	$\overline{\text{RES}}$	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	TST11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	TEST5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	TEST1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

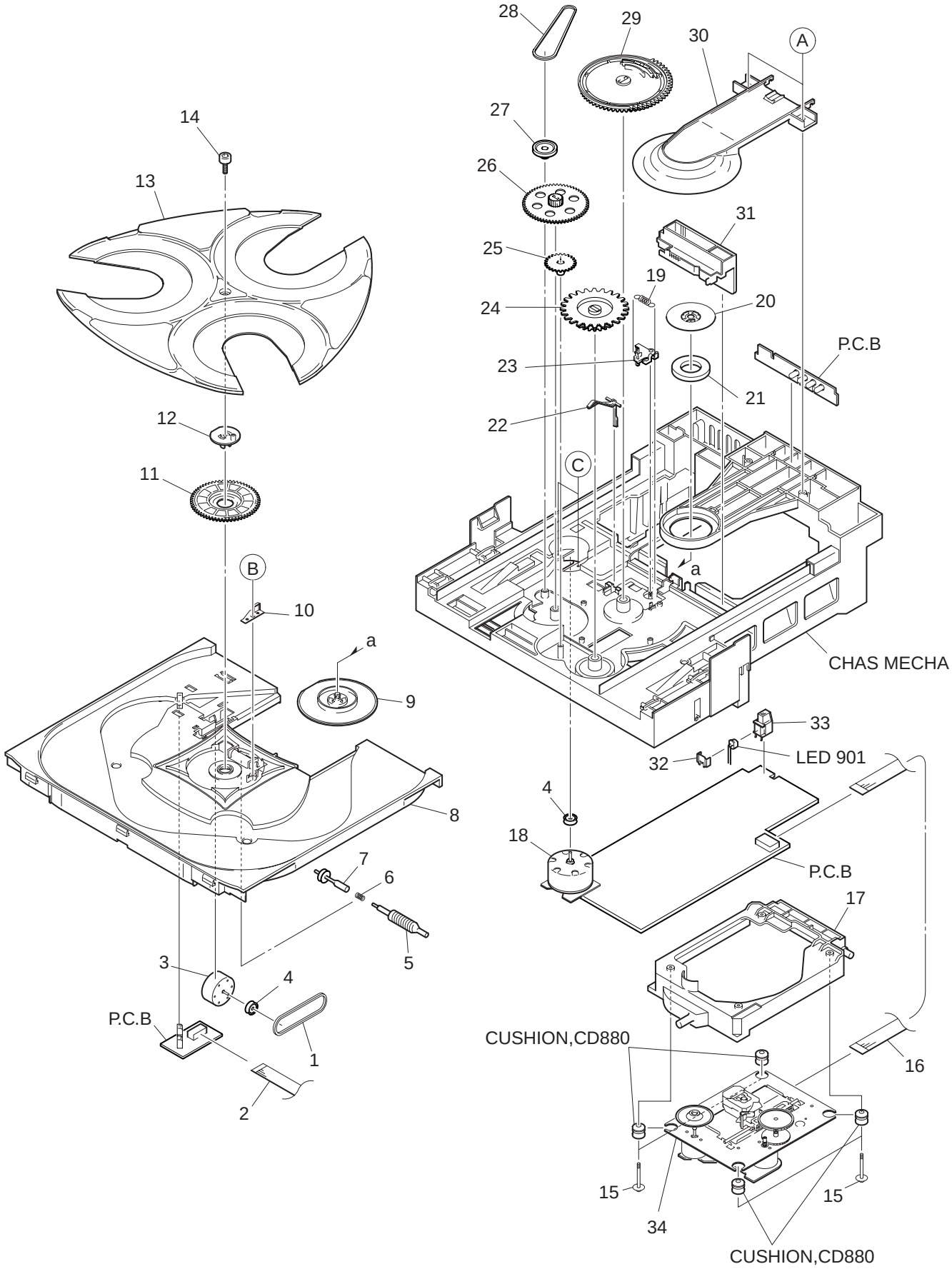
Note: The same potential must be applied to the respective power supply terminals. (VDD, VVDD, LVDD, RVDD, XVDD)

IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE–	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD–	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD–	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA–	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE–	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	PGND	—	Analog signal GND.
23	SP	—	No connection.
24	SP1	O	Single ended output of the CV+ and CV– pin input signal.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP–	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL–, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP–, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSH	O	RF output pin.
42	RFS–	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	NC	I	No connection.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REF1	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDO	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

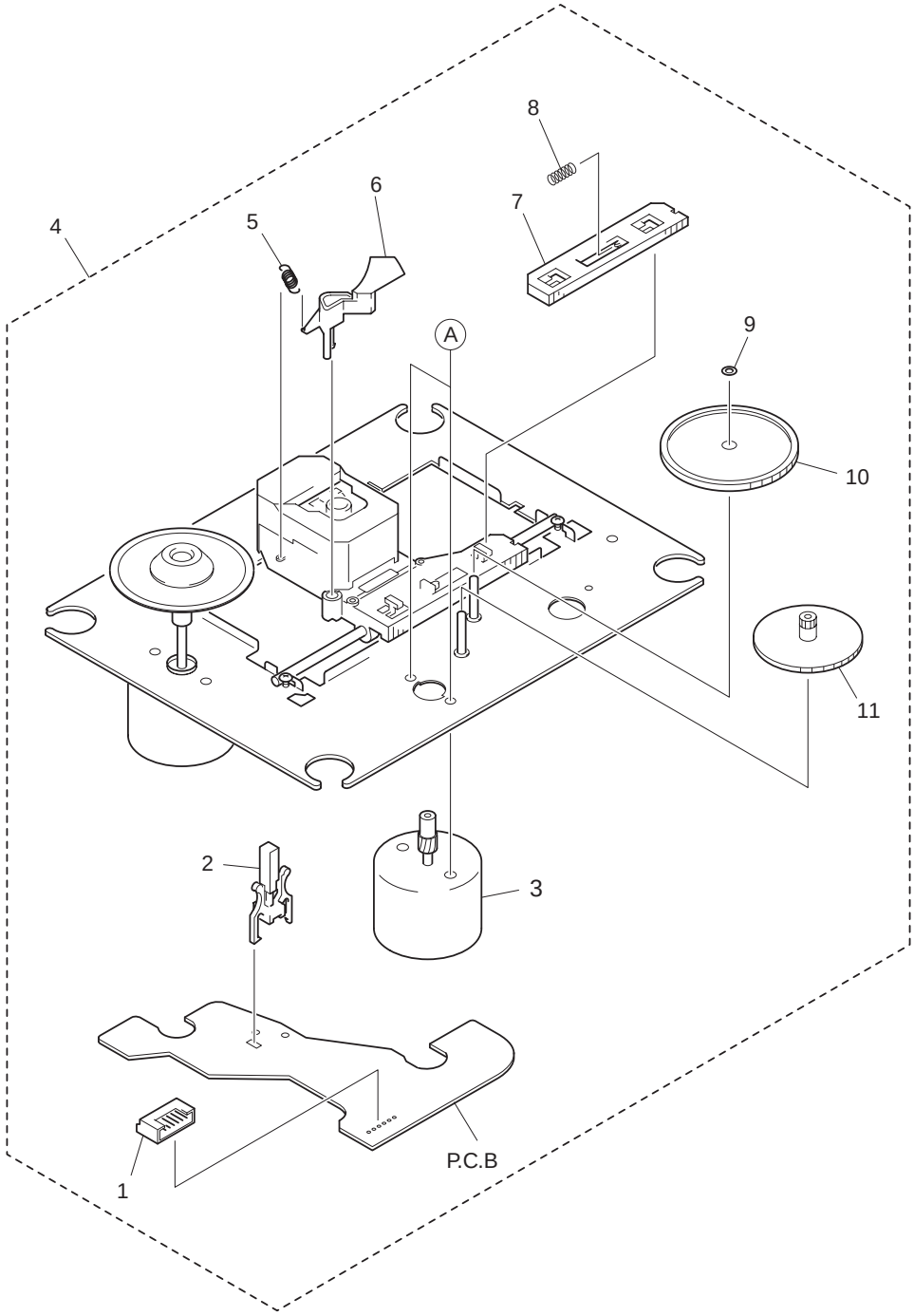
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-225-010		BELT,SQ1.0-63.3
2	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N
3	87-045-364-010		MOTOR(BCH3B14)
4	84-ZG1-267-010		PULLEY,LOAD MO 8
5	84-ZG1-238-010		GEAR,WORM N
6	84-ZG1-248-010		SPR-C,WORM
7	84-ZG1-239-210		PULLY,WORM N
8	84-ZG1-008-210		TRAY,NO3
9	84-ZG1-243-210		HLDR,MAGNET N(J)
10	84-ZG1-259-010		SPR-P,WORM
11	84-ZG1-269-010		GEAR,MAIN TT 4
12	84-ZG1-224-010		LEVER,TT
13	84-ZG1-005-210		TURNTABLE,NO1(*)
14	81-ZG1-239-010		S-SCREW,TT
15	8A-ZG1-201-010		S-SCREW,MECH 880
16	85-NFT-611-110		FF-CABLE 16P-1.0
17	84-ZG1-299-210		HLDR,MECHA NO3
18	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
19	84-ZG1-211-010		SPR-E CAM S
20	81-ZG1-255-110		PLATE,MAGNET MK2
21	83-ZG3-604-010		RING,MAG 2
22	83-ZG3-213-010		LVR,SW
23	84-ZG1-266-010		LEVER,CAN 8
24	84-ZG1-205-210		GEAR,TRAY (*)
25	81-ZG1-291-110		GEAR,TRAY RELAY NO3
26	84-ZG1-274-010		GEAR,RELAY 8
27	84-ZG1-207-010		PULLEY,RELAY
28	84-ZG1-209-010		BELT,SQ1.8-117.7
29	84-ZG1-215-410		GEAR,MAIN CAM BLU
30	84-ZG1-011-010		REFLECTOR,CD
31	84-ZG1-216-310		SLIDE,MECHA CAM YEL
32	84-ZG1-261-010		LID,OPTICAL
33	84-ZG1-244-310		CABI,OPTICAL
34	M8-ZZK-C90-070		KSM-880CAB
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-067-981-010		BVT2+3-6 BLK
C	87-251-070-410		U+2.6-3

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	91-564-722-110		CONN,PIN 6P
2	91-572-085-110		LEAF SWITCH
3	9X-264-655-010		SL MOTORR ASSY
4	M8-ZZK-C90-070		KSM-880CAB
5	92-647-416-020		SPRING EXTENSION
6	92-647-595-020		SHUTTER B
7	92-647-732-010		NS SLIDE RACK
8	92-647-742-010		SPRING COMPRESSION
9	93-321-813-110		POLI WASHER
10	92-647-407-010		GEAR A
11	92-647-408-020		GEAR B
A	93-713-786-510		SCREW,+P2-3

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

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